JAWAHALAL NEHRU CENTRE FOR ADVANCED SCIENTIFIC RESEARCH (JNCASR)
A DEEMED – TO- BE- UNIVERSITY
JAKKUR, BANGALORE 560064
INDIA

Prospectus

Disclaimer: Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) reserves the right to change the policies viz; selections, admissions, fellowships, courses, fees, or any other matter in this handbook without prior notice. The handbook is to be read neither as part of an agreement nor as a guarantee of the details described herein.

Introduction

Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) is a multidisciplinary research institute situated in Jakkur, a locality north of Bangalore, India. It is relatively young yet well-known around the globe. Our mandate is to pursue and promote world-class research and training at the frontiers of Science and Engineering covering broad areas ranging from Materials to Genetics.

It provides a vibrant academic ambience hosting more than 500 researchers. The Centre is an autonomous institution under Department of Science and Technology, Govt. of India and a deemed to be university.

- JNCASR has obtained the status of an institution Deemed to be University in the year 2002.
- Based on the success and impact of the Centre on the scientific community in India, it was recently graded as Category-I Deemed to be University, of UGC Regulations.
- 945 students have obtained various degrees and diplomas of the Centre.

Accreditation and Rankings

NAAC

In the year 2016, JNCASR obtained NAAC accreditation of A++ with 3.76 out of the total score of 4 points.

National Institutional Ranking Framework (NIRF)

- In 2017, the Centre was ranked 4th among Universities and 11th under Overall category
- In 2018, the Centre was placed under *Special Mention Institutions*
- In 2021, the Centre was ranked 19th under the Research Category.
- JNCASR is ranked 30th under the "Research" Category for 2023.
- JNCASR is ranked 34th under the "Research" Category for 2024.

Research based Degree and Diploma Programs Offered

JNCASR has a vibrant student community with diverse backgrounds from all over India.The students enrol in various academic programmes offered by the Centre; the majoritypursue Ph. D., and the rest, integrated Ph. D., M. S. (Engg.)/M. S.(Research), and Postgraduate Diploma in Materials Science (PGDMS). In addition to the regular studentcommunity, JNCASR has national and international students visiting under various exchange programmes. The Centre offers the following research-based degrees:

(1) Research Programmes [(Ph.D. / MS(Engg.) / MS(Research)]

(2) Master of Science (M.Sc) in Chemistry with the option to specialize in Materials

Chemistry/Chemical Biology /Energy (Two-year programme)

(3) Master of Science (M.Sc.) in Inter-disciplinary Biosciences

(4) Integrated Ph.D. (Int. Ph.D) Programmes

Admissions to PhD and M.S. (Engg./Research) programs are carried out twice during the academic year. However admissions to Integrated PhD and MSc. programs are held only once during the academic year. The August session admits students to all the programs listed above.

The gist of the admission operations is given in the following paragraphs.

Applicants possessing the educational qualifications including those in the final semester/year of their qualifying examinations but expect to complete all the requirements for award of the degree (like examinations, project dissertations, viva-voce etc.,) before the commencement of admissions and can furnish necessary certificates on or before the completion of three months after joining are eligible to apply.

1. RESEARCH PROGRAMMES [Ph.D. / M.S(Engg.) / M.S(Research)]

1.1 Eligibility for Ph.D program

Candidates with an M Sc. or equivalent, B.E/B.Tech/B.S. (4 year) or equivalent or M.E/M.Tech or equivalent or B.VSc./M.VSc. or MBBS/MD as applicable to individual Units as given in the table below are eligible to apply.

- Candidates with an M.Sc. or equivalent, M.E/M.Tech or equivalent should have at least 55% marks in aggregate or its equivalent grade on a point scale wherever the grading system is followed.

- Candidates seeking admission after a 4-year/8-semester Bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade on a point scale where the grading system is followed.

The candidates should also have qualified in any one of the national exams: GATE/JEST/GPAT/UGC-JRF/CSIR-NET-JRF/ICMR-JRF/DBT-JRF/INSPIRE-JRF. The award certificate of such tests should have the validity period for seeking admission to a research programme as on 1st August 2025.

Qualifying in the national exam is desirable for ME/M.Tech or equivalent degree holders.

Sl No.	Unit	Eligible Education qualifications	Qualifying in any one of the national entrance tests
1.	Chemistry and Physics of Materials Unit	1. Master's Degree in Science or equivalent in Electronics, Chemical/Mathematical/Physical/ Materials Science. 2. Bachelor's Degree in Engineering/Technology/4-year Bachelor of Science or equivalent in Electrical/Electronics/Metallurgy/ Polymer/Engineering Physics/Nano Technology/Chemical.	Valid GATE /JEST score / NET-JRF*
		Master's Degree in Engineering/Technology or equivalent in Electrical/Electronics/Metallurgy/Polymer/Engineering Physics/ Nano Technology/Chemical	Qualifying in one of the national exams mentioned above is desirable
2.	Engineering Mechanics Unit	1. Master's Degree in Science or equivalent in Mathematical/ Physical Sciences. 2. Bachelor's Degree in Engineering/Technology/4-year Bachelor of Science or equivalent in Aerospace/ Mechanical /Metallurgy/ Polymer/ Engineering Physics /Chemical.	Valid GATE /JEST score / NET-JRF*
		3. Master's Degree in Engineering/Technology or equivalent in Aerospace/Mechanical/Metallurgy/Polymer/Engineering Physics/Chemical/Atmospheric Science.	Qualifying in one of the national exams mentioned above is desirable

3.	Evolutionary and Organismal Biology Unit	1. Master's Degree in Science or equivalent in Life Sciences / any area of Biological Sciences / Mathematics /Physics. 2. Bachelor's Degree in Engineering/Technology/4-year Bachelor of Science or equivalent in Biotechnology, Biological Engineering, or any Biology related area. 3. MBBS /M.D. 4. B.VSc. / M.VSc.	Valid GATE /JEST score / NET-JRF*
		Master's Degree in Engineering/Technology or equivalent in Biotechnology, Biological Engineering, or any Biology related area.	Qualifying in one of the national exams mentioned above is desirable
4.	Molecular Biology and Genetics Unit	1. Master's Degree in Science or equivalent in Bioinformatics, Biotechnology, Chemical/ Biological/Life Sciences. 2. Bachelor's Degree in Engineering/Technology/4-year Bachelor of Science or equivalent in Biotechnology, Bioinformatics, or any Biology related area. 3. MBBS /M.D.	Valid GATE /JEST/ score / NET-JRF*
		Master's Degree in Engineering/Technology or equivalent in Biotechnology, Bioinformatics, or any Biology related area.	Qualifying in one of the national exams mentioned above is desirable
5.	New Chemistry Unit	1. Master's Degree in Chemistry/Physics. 2. Bachelor's Degree in Engineering/Technology/4-year Bachelor of Science (preferred with Chemistry as a major subject)	Valid GATE score / NET-JRF*
6.	Neuroscience Unit	1. Master's Degree in Science or equivalent in Neuroscience, Bioinformatics, Biotechnology, Biological/Life Sciences/ Pharmacy. 2. 4-year Bachelor of Science or equivalent in Biotechnology, Bioinformatics, or any Biology related area/Bachelor's Degree in Engineering or Technology (electrical or computer science branches) 3. MBBS /M.D. 4. Master's/4-year Bachelor's Degree in non-Biology area with demonstrated interest in Neuroscience can also apply	Valid GATE /JEST/GPAT score / NET-JRF*
		Master's Degree in Engineering/Technology or equivalent in Biotechnology, Bioinformatics, or any Biology related area.	Qualifying in one of the national exams mentioned above is desirable
7.	Theoretical Sciences Unit	1. Master's Degree in Science or equivalent in Electronics, Chemical/Mathematical/Physical/Materials Sciences. 2. Bachelor's Degree in Engineering/Technology/4-year Bachelor of Science or equivalent in Aerospace/ Engineering Physics/ Electrical/ Electronics /Metallurgy /Chemical/Mechanical Sciences.	Valid GATE /JEST score / NET-JRF*
		3. Master's Degree in Engineering/Technology or equivalent in Aerospace/EngineeringPhysics/Electrical/Electronics/Metallurgy/ Chemical/Mechanical Sciences.	Qualifying in one of the national exams mentioned above is desirable

Note:

1.The GATE/JEST/GPAT/NET JRF/other National entrance test passing certificate/score card should be valid as on 01 August 2025.

2. *NET JRF includes –Joint CSIR-UGC NET for JRF; UGC-NET for JRF; DBT JRF; ICMR JRF; INSPIRE. Applicants must be qualified for Junior Research fellowship (JRF) to be eligible to apply through NET JRF mode.

3. Applicants applying through INSPIRE mode must be in possession of a valid provisional INSPIRE offer for consideration of their application at level II of the selection, issued by DST at the time of interview.

1.2 Eligibility for M.S. (Engg.) and M.S. (Research) programs

- M.S. (Engg.) is offered by Chemistry and Physics of Materials Unit (CPMU), Engineering Mechanics Unit (EMU), Theoretical Sciences Unit (TSU) and New Chemistry Unit (NCU).

  The candidate should possess B.E/B.Tech/B.S. (4 year) in the areas listed in the above table (relevant to the Unit offering) with a valid GATE /JEST score / NET-JRF*.

- M.S. (Research) is offered by Evolutionary and Organismal Biology Unit (EOBU), Molecular Biology Unit (MBGU) and Neuroscience Unit.

  The candidate should possess B.E/B.Tech/B.S. (4 year) /B.VSc./M.VSc. or MBBS/MD in the areas listed in the above table (relevant to the Unit offering) with a valid GATE /JEST score / NET-JRF*.

* as indicated in the Note above.

1.3 Selection procedure

Candidates are short-listed for an interview based on their performance in the national exam(s) and academic performance. The selection is based on the performance in the interview (in some Units, an aptitude test/preliminary interview may precede the final interview).

Note: Interviews will be held in-person only.

2. MASTER OF SCIENCE (M.Sc.)

2.1 Eligibility

Programme	Qualifying degree and exams
Chemistry	• Applicants possessing a minimum of 55% marks at the Bachelor's degree in any branch of Science with Chemistry as one of the major subject.

Inter-disciplinary Biosciences (*with an option to specialize in Epigenetics and Diseases, Neurosciences, Human Disease Genetics, or Chemical Biology approach to understanding Disease Biology and Drug Discovery*)	• Applicants possessing a minimum of 55% marks at the Bachelor's degree in any branch of Biological Science with Chemistry as a significant subject and who have qualified for the Joint Admissions Test for Masters (JAM) 2025 and/or equivalent examination are eligible to apply.

2.2 Selection procedure:

Shortlisting for interviews for Master of Science (M.Sc.) in Chemistry will be done based on the performance in Joint Admission test for Master's (JAM) 2025 or a written examination conducted by JNCASR.

For M.Sc. Inter-disciplinary Biosciences, shortlisted JAM candidates will be called for an interview directly. The final selection is based on the performance in the interview.

Note: Interviews will be held in-person only.

3. INTEGRATED Ph. D. PROGRAMME

3.1 Eligibility

Disciplines	Qualifying degree and exams
Physical Science (Specialization in Materials) ***Web link for related information is available at*** https://www.jncasr.ac.in/sites/default/files/users/user277/Int.%20PhD_Physical%20Sciences.pdf	• Students with minimum of 55% marks at bachelor's degree in any branch of Science/Engineering with an aptitude for advanced physics education and materials research. • Candidacy will be evaluated on past academic records and/or scores in national level exams
Chemical Science	• Students with minimum of 55% marks at bachelor's degree in any branch of Science with Chemistry as one of the major and mathematics as a subject at least up to PUC (10+2 level) are eligible to apply.
Biological Science	• Students with minimum of 55% marks in bachelor's or equivalent degree in Physical, Chemical or Biological Science (including Biotechnology, Pharmaceutical, Veterinary Sciences and Agricultural Sciences) or B.E/B. Tech degree or equivalent degree.

3.2 Selection procedure

Shortlisting for interviews for selection for the Int. Ph.D. Physical Science Programme will be based on academic records, performance in the national level exams, statement of purpose mentioned in the application form.

Shortlisting for interviews for Int. Ph.D. Chemical Science Programme will be done based on the performance in Joint Admission test for Master's (JAM) 2025 or a written examination conducted by JNCASR.

The applications for the Int. Ph.D. Biological Science Programme will be screened based on overall academic performance for eligibility to attend an online entrance exam. The top candidates shortlisted after the exam will be invited to appear for interviews shortly afterwards.

The final selection for the Int. Ph.D. Degree Programme will be based on the performance in the interview.

Note: Interviews will be held in-person only.

4. POST GRADUATE DIPLOMA IN MATERIALS SCIENCE (PGDMS)

Postgraduate Diploma in Materials Science (PGDMS) is a full-time two semester (one-year) programme offered by the International Centre for Materials Science (ICMS), JNCASR. The training will be imparted through projects and formal courses. A stipend will be paid as per norms.

4.1 Eligibility

Candidates who have completed their M.Sc. in any branch of Science are eligible to apply.

4.2 Selection procedure

The applications received by the deadline will be scrutinized by the Committee and eligible/meritorious candidates will be shortlisted for offline interviews. Only a limited number of candidates will be selected based on the recommendation of a selection committee.

Note: Interviews will be held in-person only.

HOW TO APPLY

Applications for all the degree programmes mentioned above are available online. Only online applications are considered.

APPLICATION FEE

The application fee is Rs. 1000/- and is non-refundable. The payment is to be made to the JNCASR bank account through NEFT. Service charges if any, must be borne by the applicant. Please visit the online admissions portal for beneficiary bank details.

Approved Intake

Degree Program	**Approved Intake**
Ph.D	Maximum 8 per faculty (as per vacancy)
Int. Ph.D (P.S.+ B.S. + C.S.)	Maximum of 25 in each area
Masters Programs	Maximum 60

Fellowships

All the Ph.D students joining JNCASR are eligible for a fellowship from the respective funding agency depending upon their mode of entry. Students enrolled to the Ph.D, Masters in Engineering or Research degree programs and PGDMS are paid fellowships (as applicable) as per the norms of the Centre. Those joining the Postgraduate degree programs in Chemistry and Biosciences are not offered any fellowship.

Faculty

Sr no	Name	Designation	Qualification	Unit
1	BALASUBRAMANIAN S	Professor	Ph.D	Chemistry and Physics of Materials Unit
2	BIVAS SAHA	Associate Professor and Warden	Ph.D	Chemistry and Physics of Materials Unit
3	CHANDRABHAS NARAYANA	Professor (on Deputation)	Ph.D	Chemistry and Physics of Materials Unit
4	ESWARAMOORTH Y M	Professor and Dean Academic Affairs	Ph.D	Chemistry and Physics of Materials Unit
5	G U KULKARNI	President	Ph.D	Chemistry and Physics of Materials Unit
6	NARAYAN K S	Professor	Ph.D	Chemistry and Physics of Materials Unit
7	SUNDARESAN A	Professor and Chair, CPMU	Ph.D	Chemistry and Physics of Materials Unit
8	TAPAS KUMAR MAJI	Professor	Ph.D	Chemistry and Physics of Materials Unit
9	MEDHA DANDU	Assistant Professor	Ph.D	Chemistry and Physics of Materials Unit
10	DIWAKAR SEYYANUR VENKATESAN	Assistant Professor	Ph.D	Engineering Mechanics Unit
11	GANESH SUBRAMANIAN	Professor	Ph.D	Engineering Mechanics Unit
12	MEHEBOOB ALAM	Professor	Ph.D	Engineering Mechanics Unit
13	SANTOSH ANSUMALI	Professor	Ph.D	Engineering Mechanics Unit
14	SREENIVAS K R	Professor and Dean Research and Development	Ph.D	Engineering Mechanics Unit
15	ANIMESH PANDEY	Assistant Professor	Ph.D	Engineering Mechanics Unit
16	AMITABH JOSHI	Professor	Ph.D	Evolutionary and Organsimal Biology Unit
17	ANAND KRISHNAN	Assistant Professor	Ph.D	Evolutionary and Organsimal Biology Unit
18	TNC VIDYA	Professor	Ph.D	Evolutionary and Organsimal Biology Unit
19	RAJESH GANAPATHY	Professor	Ph.D	International Centre for Materials Sciences
20	RANJAN DATTA	Professor	Ph.D	International Centre for Materials Sciences
21	RANJANI VISWANATHA	Professor	Ph.D	International Centre for Materials Sciences
22	ANURANJAN ANAND	Professor	Ph.D	Molecular Biology and Genetics Unit
23	KAUSTUV SANYAL	Professor (on Deputation)	Ph.D	Molecular Biology and Genetics Unit
24	KUSHAGRA BANSAL	Assistant Professor	Ph.D	Molecular Biology and Genetics Unit
25	MANEESHA S INAMDAR	Professor (on Deputation)	Ph.D	Molecular Biology and Genetics Unit

26	RAVI MANJITHAYA	Professor and Chair, NSU Chair In-charge, MBGU	Ph.D	Molecular Biology and Genetics Unit
27	TAPAS KUMAR KUNDU	Professor	Ph.D	Molecular Biology and Genetics Unit
28	VARUN BHASKAR	Assistant Professor	Ph.D	Molecular Biology and Genetics Unit
29	SHWETHA SHIVAPRASD	Ramanujan Fellow	Ph.D	Molecular Biology and Genetics Unit
30	ACHIRA ROY	Assistant Professor and Associate Warden	Ph.D	Neuroscience Unit
31	SHEEBA VASU	Professor	Ph.D	Neuroscience Unit
32	ABHISHEK KUMAR	Assistant Professor	Ph.D	New Chemistry Unit
33	BANI KANTA SARMA	Associate Professor	Ph.D	New Chemistry Unit
34	GOVINDARAJU T	Professor	Ph.D	New Chemistry Unit
35	JAYANTA HALDAR	Professor	Ph.D	New Chemistry Unit
36	KANISHKA BISWAS	Professor and Faculty In-charge Placement Alumni and International Relations	Ph.D	New Chemistry Unit
37	PRATAP VISHNOI	Assistant Professor	Ph.D	New Chemistry Unit
38	PREMKUMAR SENGUTTUVAN	Associate Professor	Ph.D	New Chemistry Unit
39	SARIT S AGASTI	Associate Professor	Ph.D	New Chemistry Unit
40	SEBASTIAN CHIRAMBATTE PETER	Professor	Ph.D	New Chemistry Unit
41	SRIDHAR RAJARAM	Professor	Ph.D	New Chemistry Unit
42	SUBI JACOB GEORGE	Professor and Chair, NCU	Ph.D	New Chemistry Unit
43	KAVITA JAIN	Professor	Ph.D	Theoretical Sciences Unit
44	SHOBHANA NARASIMHAN	Professor	Ph.D	Theoretical Sciences Unit
45	SRIKANTH SASTRY	Professor	Ph.D	Theoretical Sciences Unit
46	SUBIR KUMAR DAS	Professor and Chair TSU	Ph.D	Theoretical Sciences Unit
47	SWAPAN K PATI	Professor	Ph.D	Theoretical Sciences Unit
48	UMESH V WAGHMARE	Professor and Dean Faculty Affairs	Ph.D	Theoretical Sciences Unit
49	VIDHYADHIRAJA N S	Professor and Dean Fellowships and Extension Programs	Ph.D	Theoretical Sciences Unit

Fee structure

Particulars	**Degree/Diploma Program**				
	Ph.D.	**M.S. (Int. Ph.D.)**	**M.S. (Engg./ Research)**	**M.Sc.**	**PGDMS**
Tuition fees (annual)	15000	7,500	10,500	7,500	7,500
CMS	300	300	300	300	300
Personal Accident Insurance	25	25	25	25	25

Other Academic Fees (covers administrative services like issue of NOC, provisional Certificate, Transcript etc.) (annual)	3,700	3,700	3,700	3,700	3,700
Tuition Fee is completely waived for SC/ST students for all programs Fees and Deposits will be refunded as per the norms of the Centre					

Refundable Deposits (one-time payment during admission)

Refundable Deposits	**Amount in Rupees**	
Hostel and Mess Deposit	10,000	Uniform for all programs
Statutory and Library	10,000	Uniform for all programs

Thesis Processing Fees

Program	**Amount in Rupees**
Ph.D.	5,000
M.S. (Engg./Research)	3,000

Academic Calendar

Academic calendar – Ph. D.

Event	**Timeline**		**Additional Information**
Admission	*Regular*	*Mid-year*	Both tracks follow the same formalities – Annexure-I
Academic year	First working day of		Annexure-IA: Prior to arrival at the Campus Annexure-IB: During enrolling
	August	January	
Enrolling	on the date of reporting		
Orientation	around mid-August		in a combined session
Semester-1 & 2 -Course work			
Semester 3 & 4 - Embark on Research Project and Complete Comprehensive examination for Upgradation to SRF			
Semester 5 to 9 – Ph.D. Thesis work			
Semester 10 - Colloquium, Synopsis submission and Ph.D. Thesis submission			

Academic calendar – Int. Ph.D.

Event	Timeline	Additional Information
Admission	*Regular*	Annexure-I
Academic year	First working day of August	Annexure-IA: Prior to arrival at the Campus Annexure-IB: During enrolling
Enrolling	on the date of reporting	
Orientation	around mid-August	in a combined session and a separate session by the Unit
Semester 1 to 4 - Course work and Qualifying Examination for Confirmation of Doctoral Candidacy		
Semester 5 & 6 M.S. Research Report		
Semester 7 to 13 -Ph.D. thesis work		
Semester 14 - Colloquium, Synopsis and Ph.D. Thesis submission		

Academic calendar – M.S. (Engg./M.S. (Research)

Event	Timeline		Additional Information
Admission	*Regular*	*Mid-year*	Both tracks follow the same formalities – Annexure-I
Academic year	First working day of		Annexure-IA: Prior to arrival at the Campus Annexure-IB: During enrolling
	August	January	
Enrolling	on the date of reporting		
Orientation	around mid-August		in a combined session
Semester-1 & 2 - Course work			
Semester 3 - Embark on M.S. Research Project and complete Comprehensive examination			
Semester 4 - Colloquium, Synopsis and M.S. Thesis submission			

Contact details

Admissions related queries:

Academic Office	academic@jncasr.ac.in	080-22082777

Students related grievances or requests:

Deputy Controller of Examinations	acoord@jncasr.ac.in	080-22082900
Dean Academic Affairs	deanacad@jncasr.ac.in	080-22082764

Anti-ragging:

Deputy Controller of Examinations	acoord@jncasr.ac.in	080-22082900
President	president@jncasr.ac.in	080-22082752

Administration:

Administrative Officer	ao@jncasr.ac.in	080-22082751
President	president@jncasr.ac.in	080-22082752

Sexual Harassment/ICC:

Deputy Controller of Examinations	acoord@jncasr.ac.in	080-22082900
Chairperson, ICC	rv@jncasr.ac.in	080-22082573

***