



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

Prospectus

2023-24

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.

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.

Research based Degree 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 majority pursue 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 student community, 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

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.

Ph.D. / M.S(Engg.) / M.S(Research)

1.1 Eligibility

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. They should have at least 55% marks in their highest University examination and 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 research programme as on 1st August/1st January. 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 / CSIR-JRF/UGC-JRF/DBT-JRF/ICMR- JRF / INSPIRE
		3. 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 / CSIR-JRF/UGC-JRF/ INSPIRE
		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 Integrative 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 / CSIR-JRF/UGC-JRF/DBT-JRF/ICMR- JRF / ICAR AICE-JRF/INSPIRE
		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 / CSIR-JRF/UGC- JRF/DBT-JRF/ICMR- JRF / INSPIRE
		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 / CSIR-JRF/UGC-JRF/ DBT-JRF/ICMR-JRF/INSPIRE
6.	Neuroscience Unit	1. Master's Degree in Science or equivalent in 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	Valid GATE /JEST/GPAT score / CSIR-JRF/UGC-JRF/DBT- JRF/ICMR- JRF / INSPIRE

		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	
		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 / CSIR-JRF/UGC-JRF/DBT-JRF/ICMR- JRF / INSPIRE
		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

1.2 Selection procedure

Candidates are short-listed for an interview based on their performance in the national entrance test(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).

2 MASTER OF SCIENCE (M.Sc.)

2.1 Master of Science (M.Sc.) in Chemistry

2.1.1 Eligibility

a) Applicants possessing a minimum of 55% marks at the Bachelor's degree in any branch of Science with Chemistry as a major subject and who have qualified the Joint Admissions Test for Masters (JAM) 2023 are eligible to apply.

2.1.2 Selection procedure

Shortlisted JAM candidates will be called for an interview directly. The final selection is based on the performance in the interview.

2.2 Master of Science (M.Sc.) in inter-disciplinary Biosciences

2.2.1 Eligibility

a) 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 valid Joint Admission test for Master's (JAM) score and/or equivalent examination are eligible to apply.

2.2.2 Selection procedure:

Shortlisted JAM candidates will be called for an interview directly. The final selection is based on the performance in the interview.

3. INTEGRATED Ph. D. PROGRAMME

3.1 Eligibility

Disciplines	Qualifying degree and exams
<i>Physical Science (Specialization in Materials)</i> Web link for related information is available at https://www.jncasr.ac.in/sites/default/files/users/user277/Int.%20PhD_Physical%20Sciences.pdf	<ul style="list-style-type: none">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
<i>Chemical Science</i>	<ul style="list-style-type: none">Students with minimum of 55% marks at bachelor's degree in any branch of Science with Chemistry as a major and mathematics as a subject at least up to PUC (10+2 level) and who have qualified the JAM 2023 are eligible to apply.
<i>Biological Science</i>	<ul style="list-style-type: none">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.Candidates who have qualified the JAM 2023 test are encouraged to apply.

3.2 Selection procedure

Shortlisting for interviews for selection to 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 selection to the Int. Ph.D Chemical Science Programme will be based on a valid Joint Admission test for Master's (JAM) score.

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

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

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

P.S- Physical Science, B.S.- Biological Science C.S.- Chemical Science

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 Masters in Engineering or Research degree programs are paid fellowships 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	Ph.D	Chemistry and Physics of Materials Unit
3	CHANDRABHAS NARAYANA	Professor	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	DIWAKAR SEYYANUR VENKATESAN	Assistant Professor	Ph.D	Engineering Mechanics Unit
10	GANESH SUBRAMANIAN	Professor	Ph.D	Engineering Mechanics Unit
11	MEHEBOOB ALAM	Professor	Ph.D	Engineering Mechanics Unit
12	SANTOSH ANSUMALI	Professor	Ph.D	Engineering Mechanics Unit
13	SREENIVAS K R	Professor and Dean Research and Development	Ph.D	Engineering Mechanics Unit
14	AMITABH JOSHI	Professor	Ph.D	Evolutionary and Organsimal Biology Unit
15	ANAND KRISHNAN	Assistant Professor	Ph.D	Evolutionary and Organsimal Biology Unit
16	TNC VIDYA	Associate Professor	Ph.D	Evolutionary and Organsimal Biology Unit
17	RAJESH GANAPATHY	Professor	Ph.D	International Centre for Materials Sciences
18	RANJAN DATTA	Professor	Ph.D	International Centre for Materials Sciences
19	RANJANI VISWANATHA	Professor	Ph.D	International Centre for Materials Sciences
20	ANURANJAN ANAND	Professor	Ph.D	Molecular Biology and Genetics Unit
21	KAUSTUV SANYAL	Professor and Chair Molecular Biology and Genetics Unit	Ph.D	Molecular Biology and Genetics Unit
22	KUSHAGRA BANSAL	Assistant Professor	Ph.D	Molecular Biology and Genetics Unit
23	MANEESHA S INAMDAR	Professor	Ph.D	Molecular Biology and Genetics Unit
24	RANGA UDAY KUMAR	Professor	Ph.D	Molecular Biology and Genetics Unit
25	RAVI MANJITHAYA	Professor and Chair, NSU	Ph.D	Molecular Biology and Genetics Unit
26	TAPAS KUMAR KUNDU	Professor	Ph.D	Molecular Biology and Genetics Unit
27	ACHIRA ROY	Assistant Professor	Ph.D	NeuroScience Unit

28	SHEEBA VASU	Professor and Associate Warden	Ph.D	NeuroScience Unit
29	BANI KANTA SARMA	Assistant Professor	Ph.D	New Chemistry Unit
30	GOVINDARAJU T	Professor and Chair, ETU	Ph.D	New Chemistry Unit
31	JAYANTA HALDAR	Professor and Warden	Ph.D	New Chemistry Unit
32	KANISHKA BISWAS	Associate Professor	Ph.D	New Chemistry Unit
33	PRATAP VISHNOI	Assistant Professor	Ph.D	New Chemistry Unit
34	PREMKUMAR SENGUTTUVAN	Associate Professor	Ph.D	New Chemistry Unit
35	SARIT S AGASTI	Associate Professor	Ph.D	New Chemistry Unit
36	SEBASTIAN CHIRAMBATTE PETER	Professor	Ph.D	New Chemistry Unit
37	SRIDHAR RAJARAM	Professor	Ph.D	New Chemistry Unit
39	SUBI JACOB GEORGE	Professor and Chair, NCU	Ph.D	New Chemistry Unit
40	KAVITA JAIN	Professor	Ph.D	Theoretical Sciences Unit
41	SHOBHANA NARASIMHAN	Professor and Faculty In-charge Placement Alumni and International Relations	Ph.D	Theoretical Sciences Unit
42	SRIKANTH SASTRY	Professor	Ph.D	Theoretical Sciences Unit
43	SUBIR KUMAR DAS	Professor and Chair TSU	Ph.D	Theoretical Sciences Unit
44	SWAPAN K PATI	Professor	Ph.D	Theoretical Sciences Unit
45	UMESH V WAGHMARE	Professor and Dean Faculty Affairs	Ph.D	Theoretical Sciences Unit
46	VIDHYADHIRAJA N S	Professor and Dean Fellowships and Extension Programs	Ph.D	Theoretical Sciences Unit

Fee structure

The tuition fee to be paid for various degree programs at the Centre is as follows:

Tuition fee	Rs. 10,000/- per annum*
-------------	-------------------------

For Ph.D. students:

Tuition fee	Rs. 5,000/- per annum*
-------------	------------------------

Fee structure for Integrated Ph.D. / M.Sc (Chemistry)/ M.Sc. Inter-disciplinary Biosciences:

Tuition fee	Rs.7,000/- per annum*
-------------	-----------------------

Fee structure for M.S. (Engg.)/Research students:

Students registered to all the programs have to pay the following in addition to the tuition fees mentioned above:

* On production of necessary documents, SC/ST candidates are exempted from the payment of tuition fee.

Fees and Deposits will be refunded as per the norms of the Centre.

Academic Calendar

Academic calendar – Ph. D.

Event	Timeline		Additional Information
Admission	<i>Regular</i>	<i>Mid-year</i>	Both tracks follow the same formalities – Annexure-I
Academic year	First working day of		Annexure-IA: Prior to arrival at the Campus
	August	January	
Enrolling	on the date of reporting		Annexure-IB: During enrolling
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	<i>Regular</i>	Annexure-I
Academic year	First working day of August	Annexure-IA: Prior to arrival at the Campus
Enrolling	on the date of reporting	Annexure-IB: During enrolling
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		

Contributory Medical Scheme		Rs. 200/- per month	<u>Academic calendar – M.S. (Engg./M.S. (Research))</u>
Personal Accident Insurance		Rs. 25/- per month	
Hostel and Mess Deposit (upon joining)		Rs. 10,000/- (refundable)	
Statutory and Library Deposit (upon joining)		Rs. 10,000/- (refundable)	
Event		Timeline	
<i>Issue of duplicate Identity card (if required)</i>		Rs. 200/-	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
	August	January	
Enrolling	on the date of reporting		Annexure-IB: During enrolling in a combined session
Orientation	around mid-August		
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:

Academic Coordinator	acoord@jncasr.ac.in	080-22082900
Dean Academic Affairs	deanacad@jncasr.ac.in	080-22082764

Anti-ragging:

Academic Coordinator	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:

Academic Coordinator	acoord@jncasr.ac.in	080-22082900
Chairperson, ICC	rv@jncasr.ac.in	080-22082573