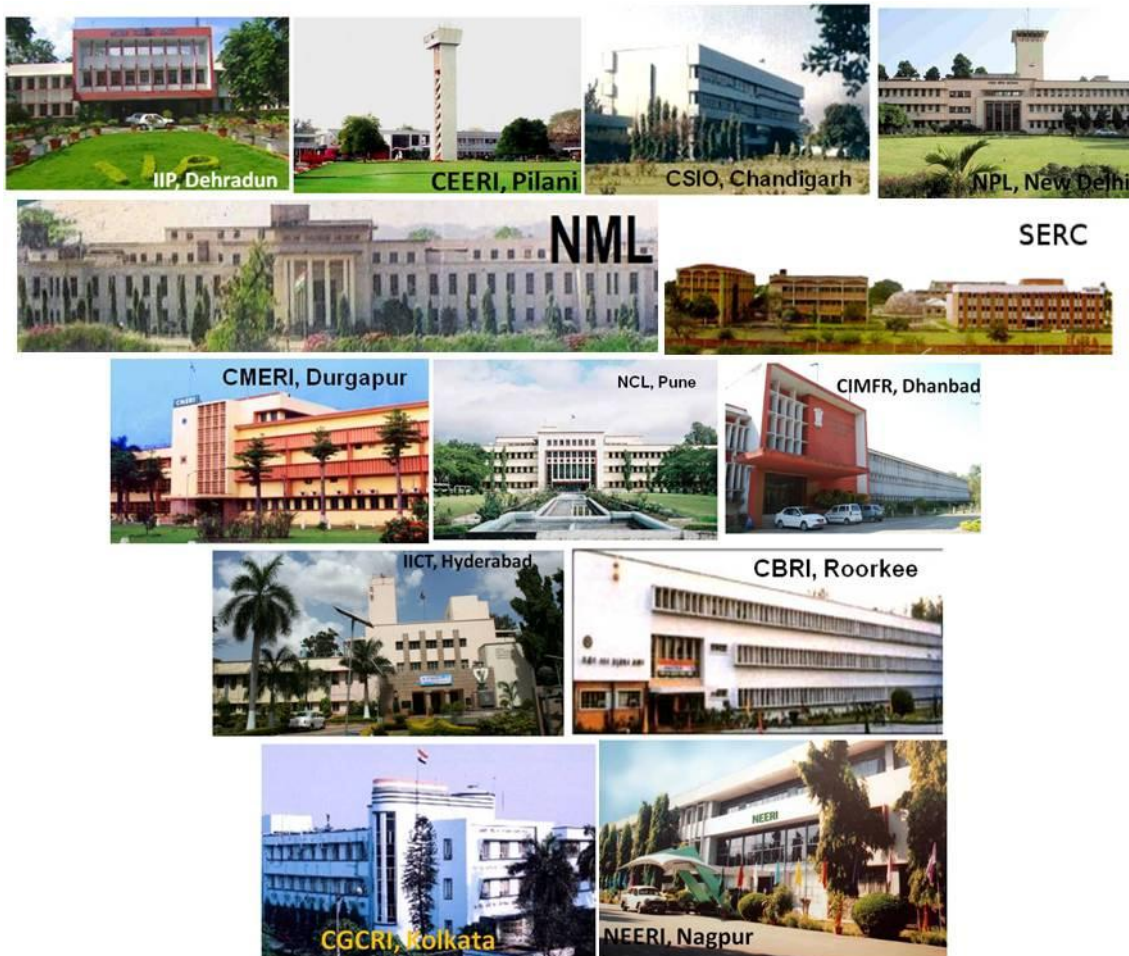# Post Graduate Research Programme in Engineering Integrated M.Tech-Ph.D Programme

Brochure 2012-2013

Last date for submission of online application form is June 23, 2012

Academy of Scientific and Innovative Research (AcSIR)
Anusandhan Bhawan, 2, Rafi Marg, New Delhi – 110 001
http://acsir.res.in

CSIR invites applications for the 2+3 years full -time residential **Post Graduate Research Programme in Engineering** (**Integrated M.Tech-Ph.D)** programme of Academy of Scientific and Innovative Research (AcSIR) in the cutting-edge technological areas. The salient features of the programmes are given below:

Programme	Coordinating Laboratory	Essential Qualification (BE/BTech or equivalent)	Number of Seats
Advanced Automotive Technology	Indian Institute of Petroleum (CSIR-IIP) Dehradun – 248 005 http://www.iip.res.in	Mechanical	5
Advanced Electronic Systems	Central Electronics Engineering Research Institute (CSIR-CEERI), Pilani – 333 031 http://www.ceeri.res.in	Electronics /ECE/EIE/EEE, Electrical, Instrumentation, Engineering Physics, Radio Physics, Computer Sc./Engg, Mechatronics, Mechanical	6
Advanced Instrumentation Engineering	Central Scientific Instruments Organisation (CSIR-CSIO), Chandigarh –160 030 http://www.csio.res.in	All major branches of Engineering	15
Advanced Materials Physics and Engineering	National Physical Laboratory (CSIR-NPL) New Delhi-110012 http://www.nplindia.org	Materials Science, Metallurgy, Engineering Physics, Electrical, Electronics/ECE/EIE/EEE	10
Advanced Petroleum Science and Technology	Indian Institute of Petroleum (CSIR-IIP) Dehradun – 248 005 http://www.iip.res.in	Chemical	5
Advanced Semiconductor Electronics	Central Electronics Engineering Research Institute (CSIR-CEERI), Pilani – 333 031 http://www.ceeri.res.in	Electronics/ ECE/EIE/EEE, Electrical, Instrumentation, Engineering Physics, Radio Physics, Computer Sc./Engg, Mechatronics	9
Applied and Computational Mechanics	Central Mechanical Engineering Research Institute (CSIR-CMERI), Durgapur – 713 209 http://www.cmeri.res.in	Mechanical, Aerospace, Civil, Chemical	5
Building Engineering and Disaster Mitigation	Central Building Research Institute (CSIR-CBRI) Roorkee – 247667 http://www.cbri.res.in	Civil / Construction/ Building Science and Technology	10
Chemical Engineering-Modeling & Simulation and Materials & Processes	National Chemical Laboratory (CSIR-NCL) Pune – 411008 http://www.ncl-india.org	Chemical Engg/Tech, Polymer, Biochemical, Biotechnology, Material Science, Petroleum & Petrochemical	15
Engineering of Structures	Structural Engineering Research Centre (CSIR-SERC), Chennai – 600 113 http://www.serc.res.in	Civil	5
Environmental System Engineering and Modeling	National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur – 440 020 http://www.neeri.res.in	Civil, Chemical, Environmental, Electrical, Mechanical	5

Programme	Coordinating Laboratory	Essential Qualification (BE/BTech or equivalent)	Number of Seats
Glass and Ceramic Engineering	Central Glass and Ceramics Research Institute (CSIR-CGCRI), Kolkata – 700032 http://www.cgcri.res.in	All major branches of Engineering	5
High Power Microwave Devices and System Engineering	Central Electronics Engineering Research Institute (CSIR-CEERI), Pilani – 333 031 http://www.ceeri.res.in	Electronics /ECE/EIE/EEE, Electrical, Instrumentation, Engineering Physics, Radio Physics, Mechanical, Mechatronics, Comp. Sc./Engg	5
Mechatronics	Central Mechanical Engineering Research Institute (CSIR-CMERI), Durgapur – 713 209 http://www.cmeri.res.in	Mechanical, Electrical, Comp. Sc./Engg, Mechatronics, Electronics/ECE/EIE/EEE, Radio Physics, Production, Manufacturing	5
Mineral Processing, Metal Extraction and Resource & Waste Management	National Metallurgical Laboratory (CSIR-NML), Jamshedpur – 831007 http://www.nmlindia.org	Materials & Metallurgical, Materials; Mineral Processing, Chemical	7
Mine Safety Engineering	Central Institute of Mining and Fuel Research (CSIR-CIMFR), Dhanbad – 826015 http://www.cmriindia.nic.in	Mining, Mechanical, Electrical, Production, Civil, Chemical, Instrumentation	10
Process Engineering Science	Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad – 500007 www.iictindia.org	Chemical Engineering/ Technology, Biochemical Engineering/ Biotechnology	5
Renewable Energy	Structural Engineering Research Centre (CSIR-SERC), Chennai – 600 113 http://www.serc.res.in	All major branches of Engineering	5
Transportation Engineering	Central Road Research Institute (CSIR-CRRI) New Delhi – 110020, http://www.crridom.gov.in	Civil, Construction	8

About the Programme

Post Graduate Research Programme in Engineering (Integrated M.Tech-Ph.D programme) offered by Academy of Scientific and Innovative Research (AcSIR) is a **2+3 years full-time residential programme** which is segregated into two segments:
  (i)   M.Tech programme consisting of four-semesters (2 years) and
  (ii) Ph.D programme (3 years) after successful completion of M.Tech will be decided on a case-by-case basis.

The programmes are designed to give in- depth exposure and hands-on R&D experience to the candidates in the respective areas. The selected candidates will be trained on exciting live projects so that they emerge as research ready scientists/engineers for taking up challenging positions.

There are up to **140 positions** out of which, **92 are for Trainee Scientists (TS)** of CSIR. The selection for the positions of **Trainee Scientists** across the participating labs will be as per the reservations policy of CSIR.

In addition, on successful completion of the M.Tech with distinction, the Trainee Scientists (TS) may be considered by CSIR for absorption in CSIR as Scientists in Pay Band-3 of the Government of India (Scale Rs. 15600 - 39100/- with Grade Pay of Rs. 6600/- plus other allowances as applicable).

There are also **Sponsored positions** available for meritorious candidates which will be filled depending on the sponsorships available at the different laboratories. For these positions, Quick Hire Fellowships may also be used by the individual laboratories.

The medium of instruction and examination will be English.

Admission Process and Eligibility for Admission

Engineering Graduates (Graduated in 2011/ Graduating in 2012) with minimum 70% marks or 7.0 CGPA are eligible to apply. The age of the candidates should not be more than 28 years as on July 01, 2012 for admission to the programme. For reserved category, age relaxation as per Govt. of India rules will be followed. A valid GATE score will be an added advantage.

Candidates who have passed their B.E./B.Tech or equivalent examination with disciplines as stated in the essential qualification column of application form before 2011 are not eligible to apply.

Candidates whose final results are awaited, but who are otherwise eligible as per the screening criteria, can also apply. If selected, they will be provisionally admitted to the programme. Their continuation in the programme will be subjected to securing required percentage/equivalent grade (depending on the cut -off marks for screening for the specific programme) and submission of marks-sheet of their final result by October 30, 2012.

The candidates can exercise a maximum of two preferences. Candidates will be screened based on their preferences. Please see the AcSIR website **http://acsir.res.in** for on-line application form submission and additional details.

Candidates short-listed for the different positions will be intimated electronically of their being shortlisted and they will be required to appear for interview for selection at the designated centres. Details of interview centres will be posted on the AcSIR website in due course.

Final selection will be based on performance of the candidate in the interview in addition to their academic performance.

Fellowship

Trainee Scientists (TS) shall receive an emolument of approximately Rs.34650/- p.m. plus allowances as applicable at CSIR.

Fellowship for **Sponsored Candidates** will be consolidated Rs. 25000/- per month for first two years during their M.Tech programme. After successful progression to Ph.D in third year, such candidates shall apply for Senior Research Fellowship (SRF) of CSIR or they may receive fellowships from Sponsored projects of the respective laboratories or some other sources.

Programme Fee Structure

One-time Admission Fee (non-refundable)   :   Rs. 4000/-

One-time Security Deposit (refundable)   :   Rs. 6000/-

Semester Tuition Fees (non-refundable)   :   Rs. 24000/-
(M.Tech 4 Semesters/ 2 years)

Monthly Tuition Fees   :   Rs. 1000/- per month
(Integrated Ph.D/ 3 years)

Hostel Boarding and Lodging Charges as per applicable norms

Total amount of Rs. 34,000 needs to be deposited at the time of admission.

Hostel boarding and lodging charges need to be paid separately as per the applicable norms of CSIR laboratory conducting the programme.

Refund of Fees

Students wanting to withdraw from the programme after deposition of fees and security amount will need to apply in writing for refund. If such an application is made on or before August 10, 2012 at the concerned CSIR laboratory, refund of fees/other charges will be made after deducting the admission fee amount of Rs. 4000/-.

No refund of fees/other charges will be made if the student leaves after joining the programme except for the security deposit / caution money amount of Rs. 6000/-.

Evaluation Procedure and Grading Scheme

The integrated MTech-Ph.D programme is made up of 2+3 years with continuous internal evaluation and a semester-end examination for all courses.

Letter grades will be awarded for each course reflecting the student's proficiency and instructor's expectation. The grades and their description along with their equivalent numerical values, where applicable, are as follows:

Letter Grade	Performance	Numerical Value
A+	Outstanding	10
A	Excellent	9
B+	Very Good	8
B	Good	7
C+	Average	6
C	Not Qualified	5
S	Satisfactory (for thesis)	
X	Unsatisfactory (for thesis)	

Performance of the student will be evaluated by two indices, semester grade point average (SGPA) and cumulative grade point average (CGPA). These will be calculated as follows:

SGPA = {Sum of (Course credit · Numerical value of course grade)} / Total course credits earned in the semester

CGPA = Cumulative points scored in all passed courses / Cumulative credits earned

A student needs to have a SGPA of over 6.0 in each semester and a CGPA of over 6.5 from second semester onward for continuation. Minimum grade point to be earned to pass any subject is 6.0.

For distinction, the student need to score CGPA = 8.0 or above.

Important Dates

Last date for receipt of on-line application form	**June 23, 2012**
Screening of Application	**June 28, 2012**
Intimation to Shortlisted Candidates (Electronic)	**July 2, 2012**
Admission selection interviews	**July 20 - 22, 2012**
Declaration of the List of Selected Candidates	**July 30, 2012**
Last date for submission of programme fees	**August 9, 2012**
Admission from waiting list	**August 10-17, 2012**
Reporting to concerned CSIR laboratory	**August 13, 2012**
Commencement of the academic session	**August 14, 2012**

For more details please visit : http://acsir.res.in

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