

# Postgraduate Research Training Programme in Engineering (PGRTPE)

## Brochure 2009-2010



**Council of Scientific & Industrial Research (CSIR)**  
Anusandhan Bhawan, 2, Rafi Marg, New Delhi – 110 001  
[www.csir.res.in](http://www.csir.res.in)

## **Two-year Post Graduate Research Training Programme in Engineering (PGRTPE) in the following areas:**

- Advanced Semiconductor Electronics
- High Power Microwave Devices and Systems Engineering
- Advanced Instrumentation Engineering
- Mechatronics
- Material Resource Engineering
- Advanced Petroleum Science and Technology
- Engineering of Structures
- Environmental System Modeling and Optimization

The programmes are designed to give in-depth exposure and hands-on R&D experience to the candidates in the above areas. On completion of the programme, the candidates will have ample scope to join the growing R&D and industrial sectors in professionally challenging positions. In addition, students completing the programme with **distinction** will be considered for **absorption** within CSIR as regular scientists in PB-3 (scale of Rs. 15600-39100 with grade pay of Rs. 6600).

The duration of the PG research training is 2 years. Extension beyond this period for completing the programme will be decided on a case-by-case basis.

The medium of instruction and examination will be English.

### **Admission Process and Eligibility for Admission**

Candidates should be graduates **in any discipline of engineering** with outstanding academic credential preferably with a valid GATE score. Short listed candidates will be called for an interview for admission selection. Reservation for SC/ST/OBC candidates shall be as per applicable Government of India norms.

Please see the CSIR website <<http://www.csir.res.in/>> for on-line application form submission and additional details. The selected candidates will be designated as "Scientist Trainee" under the CSIR Quick Hire Scientists (Fellows) — QHF scheme.

Candidates whose final results are awaited, but who are otherwise eligible, can also apply. If selected, they will be provisionally admitted to the programme. Their continuation in the programme will be subject to securing a minimum of first class (or equivalent grade / percentage) for their degree and submission of marks-sheet of their final result by October 30, 2009.

## Seats Available

- ❖ **Advanced Semiconductor Electronics** **12**  
(Allotment of the following specializations will be decided at the end of first semester based on candidate's performance and preference)
  - MEMS and Microsensors
  - Nanoelectronics
  - VLSI Design
  - Optoelectronics and Photonics
  
- ❖ **High Power Microwave Devices and Systems Engineering** **08**
  
- ❖ **Advanced Instrumentation Engineering** **10**  
(Allotment of the following specializations will be decided at the end of first semester based on candidate's performance and preference)
  - Agrionics
  - Photonics
  - Biomedical Engineering
  
- ❖ **Mechatronics** **10**
  
- ❖ **Material Resource Engineering** **10**
  
- ❖ **Advanced Petroleum Science and Technology** **10**
  
- ❖ **Engineering of Structures** **15**
  - Engineering of Structures
  - Engineering of Structures (Aircraft & Composite structures )
  - Engineering of Structures (CAD & CAM)
  
- ❖ **Environmental System Modeling and Optimization** **08**

## Fellowship

Fellowship amount of **Rs. 25,000 per month** will be awarded to selected candidates during the two-year programme.

## Programme Fee Structure

<b>One-time Admission Fee (non-refundable)</b>	<b>:</b>	<b>Rs. 4,000</b>
<b>One-time Security Deposit (refundable)</b>	<b>:</b>	<b>Rs. 6,000</b>
<b>Semester Tuition Fees (non-refundable)</b>	<b>:</b>	<b>Rs. 24,000</b>
<b>Hostel Boarding and Lodging Charges</b>	<b>:</b>	<b>As per applicable norms.</b>

Total amount of Rs. 34,000 needs to be deposited at the time of admission. Subsequently, only the semester fee of Rs. 24,000 needs to be deposited before the start of every semester.

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 17, 2009 at the concerned CSIR laboratory, refund of fees/other charges will be made after deducting the admission fee amount of Rs. 4,000.

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. 6,000.

## **Important Dates**

<b>Last date for receipt of application form:</b>	<b>June 30, 2009</b>
<b>Admission selection interviews:</b>	<b>July 20-23, 2009</b>
<b>Declaration of admission selection result:</b>	<b>July 28, 2009</b>
<b>Last date for payment of programme fees:</b>	<b>August 11, 2009</b>
<b>Admission from waiting list (if required):</b>	<b>August 17-21, 2009</b>
<b>Reporting to concerned CSIR laboratory:</b>	<b>August 31, 2009</b>
<b>Start of the academic session:</b>	<b>September 1, 2009</b>

## Evaluation Procedure and Grading Scheme

The two-year programme is made up of 4 semesters 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:

<b>A</b>	<b>10</b>	<b>Outstanding</b>
<b>B+</b>	<b>9</b>	<b>Excellent</b>
<b>B</b>	<b>8</b>	<b>Very Good</b>
<b>C+</b>	<b>7</b>	<b>Good</b>
<b>C</b>	<b>6</b>	<b>Below Average</b>

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 of the first and second semesters) and a CGPA of over 6.5 (at the end of the second semester) for continuing beyond the first year.

Students getting **E** or **F** grades in a course need to re-appear for the final course examination before the start of the next semester.

**I** grade indicates the student has not been able to complete the course requirements and needs to take necessary actions as prescribed by the CSIR laboratory.