

# **Second Meeting of Senate**

**17<sup>th</sup> August 2011; 15.00 hrs.**

## **AGENDA**



**Academy of Scientific & Innovative Research (AcSIR)**

**Anusandhan Bhawan, CSIR HQ, 2, Rafi Marg, New Delhi-110 001**



# Academy of Scientific and Innovative Research (AcSIR)

**Agenda for the 2<sup>nd</sup> meeting of the Senate  
August 17, 2011; 15:00 hrs.**

**Venue: Room No. 101, Anusandhan Bhavan, CSIR HQ, New Delhi - 110001**

## AGENDA

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1.	Condolence for Dr. Vinod Bhakuni		
2.	Welcome address by Professor Gautam Biswas, Acting Director/OSD, AcSIR and Acting Chairperson of the Senate		
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## **INITIATION OF THE MEETING**

- 1. Condolence for Dr. Vinod Bhakuni**
- 2. Welcome address by Professor Gautam Biswas, Acting Director/OSD, AcSIR and Acting Chairperson of the Senate**



## **ITEMS FOR INFORMATION**





### **3. Action taken report and confirmation of minutes.**



## **Action taken report**

**Minutes of the 1<sup>st</sup> Senate meetings are enclosed in Annexure - 1**

### **Item -5: Framing curricula and courses to be offered by the Academy**

The course Committee was announced and formed, an OM has been issued. The committee worked on framing of curricula and courses to be offered by the Academy. Its report has been submitted and is tabled for consideration.

### **Annexure - 2**

#### **Item-6: Procedure of Admission**

Admission Committee was announced and formed, an OM has been issued. The committee worked on Procedure of Admission in Academy. Its report has been submitted and is tabled for consideration.

### **Annexure – 3**

#### **Item-8: Faculties of the Academy**

Considering the recommendation of the Senate at its first meeting, offer has been made for Academy professorship to Prof. R A Mashelkar and Prof. George M Whitesides has been approved by the chairperson as per **Annexure - 4**

#### **Item-9: Formulation of the Statutes and the Ordinances of the Academy**

The Statutes and Ordinances Committee was announced and formed, an OM has been issued. The committee worked on Formulation of the statutes and Ordinances of the Academy. Its report has been submitted and is tabled in the Senate for consideration.

### **Annexure - 5**

#### **Item-10: Examination committee to oversee examination and subsequent evaluation processes**

The Examination Committee was announced and formed, an OM has been issued. The committee worked on Examination Committee to oversee examination and subsequent evaluation processes. Its report has been submitted and is tabled in the Senate for consideration.

### **Annexure - 6**



## ITEMS FOR APPROVAL



#### **Item - 4: Endorsement of PGRPE 2009 batch results**

##### **Background**

CSIR has introduced a two-year-full-time residential Post-Graduate Research Programme in 2009 in Engineering (PGRPE) under the Quick Hire Scientist (QHS) Scheme in the following cutting-edge technological areas: Advanced Semiconductor Electronics; High Power Microwave Devices & Systems Engineering; Advanced Instrumentation Engineering; Mechatronics; Materials Resource Engineering; Advanced Petroleum Science and Technology; Engineering of Structures; and Environmental Systems, Modeling & Optimization. Some CSIR Laboratories started Post Graduate Research Programmes in Engineering (PGRPE) in 2009 on a pilot scale as pre-cursor to the M.Tech. programme of the then proposed Academy. The programme has all the rigors and requirements that are proposed in the M.Tech-Integrated Ph.D programme of AcSIR. The results are enclosed as

##### **Annexure - 7**

**Status:** The first batch of PGRPE students has graduated in July 2011.

**Proposal:** The results are placed for consideration and approval of PGRPE 2009 batch results.

**Item - 5: Endorsement for the Senate for Awarding the Degree/ Diploma to the PGRPE-2009 batch Students**

**Background**

The first batch of PGRPE students has graduated in July 2011. The Senate during its meeting held on 2<sup>nd</sup> February, 2011 had approved their graduation procedure with a provisional M.Tech degree. September 15, 2011 is being suggested as the date of awarding and distributing the Degree/ Diploma certificates to the PGRPE 2009 batch students.

**Status:** PGRPE 1<sup>st</sup> batch has been graduated in July 2011.

**Proposal:** The recommendation is placed for consideration and approval of the Senate.



**ITEM FOR RATIFICATION**



## Item - 6: Ph.D Admissions ratification for August 2011 session

### Background

The list of selected Candidates is attached as **Annexure - 8**

These students are selected by different CSIR labs for Ph.D in different courses.

**Status:** Selection criteria has been designed as follows

**Ph. D. in Engineering:** Candidates with a Master's degree in Engineering/Technology/Pharmacy with a good academic record who have secured Masters degree admission based on GATE score or valid CSIR-SRF or equivalent fellowship.

Project assistants working in CSIR Institutes who have worked for a minimum of one year in the Institute are also eligible to apply. Such candidates will have to submit a statement of purpose along with recommendation of the proposed guide (with whom the candidate is undergoing project work and desires to undertake the thesis work) directly to the coordinator of the Institute in addition to filling the online form. These students will then be interviewed by a committee constituted by the Director. The committee will include the AcSIR coordinator of the Institute and the Dean's nominee among others.

**Fast Track PhD in Engineering:** Eligibility: BE/BTech from premier Institutes (IIT's, NIT's, well reputed Central and State Universities and BITS Pilani) with University/Institute first rank in any Engineering discipline are eligible to apply for PhD programmes in the discipline where the graduating department or discipline are appropriate.

In the event of selection such students have to do additional courses as per Senate norms.

**Ph. D. in Science:** Candidates with Master's degree in Science or Bachelor's degree in Engineering or Medicine having a valid National level fellowship (JRF/SRF of various funding agencies), INSPIRE or other equivalent fellowships.

Project assistants working in CSIR Institutes who have worked for a minimum of one year in the Institute are also eligible to apply. Such candidates will have to submit a statement of purpose along with recommendation of the proposed guide (with whom the candidate is undergoing project work and desires to undertake the thesis work) directly to the coordinator of the Institute in addition to filling the online form. These students will then be interviewed by a committee constituted by the Director. The committee will include the AcSIR coordinator of the Institute and the Dean's nominee among others.

**Proposal:** The recommendation of the Admission Committee in respect of Selection criteria for Ph.D Students is submitted for the approval of the Senate for Ph.D Admissions ratification for August 2011 session.



## **DISCUSSION ITEMS**

**Item - 7: Admission of PGRPE-2009 students qualified for Ph.D admission in January 2012 session**

The successfully inducted PGRPE-2009 graduates as scientists by CSIR will be posted in various laboratories by September 2011. All such scientists will be admitted to the PhD (Engineering) program of AcSIR. The minimal period for completion of the PhD programme in AcSIR is three years. The candidates will be allowed to have PhD advisers from the CSIR system based on their choice. It is ubiquitous that the inducted PGRPE scientists have to complete their PhD at AcSIR within a maximum period of four years. They will be encouraged to credit advanced courses from within the CSIR system.

### **Item - 8: Discussion on “Courses of Study” bulletin/ booklet**

The Course Committee setup with the approval of the Senate in its first meeting has formulated detailed course material. Separate booklet giving full details of courses of study for Ph.D have been separately submitted.

Courses of study have been divided into 5 clusters.

- Engineering Science
- Biology Science
- Chemical Science
- Physical Science
- Mathematical & Information Science

The courses carry information about the syllabi of the courses, credit details, practical course, reference books etc.

**Proposal:** A separate booklet of courses of Study is now being placed before the Senate for its approval.

## **Item - 9: The proposal of INAE and AICTE for Ph.D program at AcSIR**

### **Background**

The Indian National Academy of Engineering (INAE) has proposed to collaborate with CSIR for implementing the scheme to promote research in AICTE approved Institutions. The objective of the scheme is to promote research culture amongst the engineering faculty in AICTE approved institutions which could lead to the award of PhD in the chosen field of study. In the beginning it is envisaged to support 100 scholars in the age group of 25-35 years who would be placed in the relevant CSIR labs to pursue research that could lead to award of Ph.D. The letter containing the proposal is placed as **Annexure - 9**

**Proposal:** - The Senate may consider the proposal and accord in principle approval and also give further directions on formulating the modalities of implementing the proposal.



## Item - 10: Direct Ph.D (Engg)

### Background

The students with a B Tech degree and a National-level fellowship are presently eligible for admission to the PhD program in Science but not the PhD program in Engineering. Only first-rankers from IITs/NITs/BITS Pilani who are eligible for award of INSPIRE fellowships, are eligible. Currently at CSIR labs, B Tech students with a GATE score are interviewed by the duly constituted committee and awarded a JRF-GATE<sup>1</sup>; upon securing admission to IITs or ICT or other top-tier universities. As AcSIR is envisaged to be an institute of national importance, it is proposed that such students be declared eligible for the fast-track PhD program in engineering<sup>2</sup>. Similarly, students who have worked in CSIR labs after their 4-year degree and secured a CSIR-SRF may also be declared eligible center fast-track Ph.D programme.

Such students will carry out coursework identical to the M Tech coursework; and in addition courses that are required for the Integrated PhD course after the M Tech. Such students may opt to exit the PhD program with an M Tech degree after completion of the appropriate coursework and thesis requirements. The expected duration for the PhD is shorter than an M Tech followed by PhD as the time spent in the M Tech thesis is reduced: students will directly work on their PhD thesis research after completion of coursework.

### Revised eligibility criteria for Fast-track PhD in Engineering

Bachelor's degree in Engineering/Technology/Pharmacy with CPI/CGPA more than 6.0/60% *and* satisfying at least one of the conditions below:

- i) Valid GATE score greater than a cutoff value<sup>3</sup> to be decided by the admissions committee;
- ii) Valid National-level fellowship (JRF/SRF) tenable at the CSIR laboratory.
- iii) BE/ BTech from premier Institutes (IIT's, NIT's, reputed Central and State Universities and BITS Pilani) with University/ Institute first rank in any Engineering discipline.

### Selection process

Eligible candidates after screening will be interviewed by a committee as per AcSIR guidelines<sup>4</sup>. Admission of candidates qualifying based on i) or iii) above will be subject to award of either a JRF-GATE or an INSPIRE fellowship.

### Coursework requirements

Coursework requirements are identical to those students who pursue a M Tech program followed by an Integrated PhD in Engineering (which is 12 credits) Students will be required to complete the mandatory 8 credits comprising of two proposals and project concerned with societal issues, taking the total to 20 credits as mentioned in the **Annexure - 10**

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<sup>1</sup> <http://www.csirhrdg.res.in/gate.htm>

<sup>1</sup> For the 2011-12 and 2012-13 academic years, the eligibility may be restricted to those CSIR institutes who currently have students in the JRF-GATE program registered at IITs/BITS/other top-tier universities.

<sup>1</sup> It is suggested that this score be 500, which is greater than or equal to cutoff scores for most departments/disciplines at IISc for 2011, for which data is available online.

([http://admissions.iisc.ernet.in/web/Content%5Cdoc%5CResearch\\_Programme\\_CutOffReport\\_2011.xls](http://admissions.iisc.ernet.in/web/Content%5Cdoc%5CResearch_Programme_CutOffReport_2011.xls))

<sup>1</sup> In addition, it is recommended that the committee also satisfy the requirements of the selection committee for award of CSIR-JRF-GATE.

## Item - 11: Reports of Admission, Examination and Course committees

### Background

- **Admission Committee:** As proposed during first Senate meeting held on 2<sup>nd</sup> Feb. 2011, Admission Committee was constituted to form process and procedures to be followed during the admission to AcSIR. Report is enclosed as **Annexure - 11**
- **Examination Committee:** As proposed during the first Senate meeting held on 2<sup>nd</sup> February 2011, Examination Committee was constituted to submit the process and procedures along with guidelines to oversee the examination and subsequent evaluation process to be followed in AcSIR. Report is enclosed as **Annexure - 12**
- **Course Committee:** As decided in the first Senate meeting was held on 2<sup>nd</sup> February, 2011, a Course Committee was constituted for framing of curricula and courses to be undertaken by the AcSIR. Prof. Amitabha Chattopadhyay is the convenor of the committee. Various laboratories of CSIR designed courses and forwarded to the Course Committee. The committee examined, selected and fine-tuned the best course for various programmes to be undertaken by AcSIR. Report is enclosed as **Annexure - 13**

### Statues:

- **Admission Committee:** Constituted Admission Committee has submitted its report having time lines for admission process, various procedures to be followed during admission process like newspaper advertisement, online application form format and uploading of form, screening procedures of applications, eligibility criteria for various courses etc.
- **Examination Committee:** The report from Examination Committee has been received. The committee hold the meeting and discussed at length on various issues related to M.Tech and Ph.D programmes and recommended the examination and evaluate procedures for M.Tech course work and thesis work.  
Examination committee has further proposed to constitute a Doctoral Advisory Committee (DAC) for Ph.D thesis work. Examination Committee has given outline for comprehensive Examination, state of the art and open Seminar and regarding thesis evaluation. They recommended to provide provisional certificate on successful complete of M.Tech/Ph.D oral examination.
- **Course Committee:** The analysed cluster wise course booklet are tabled.

**Proposal:** The report of Admission, Examination and Course Committee are tabled for consideration and approval.

## **Item - 12: Discussion on Statutes and Ordinances**

### **Background:**

Clause (v) of the resolution directs the academy to “frame Statutes and Ordinances and to alter, modify or rescind the same.” The Statutes shall encompass procedures for administration, management of finance, management of estates and endowments, registration of graduates and maintaining a database of registered graduates, personnel rules, service rules, discipline and conduct, delegation and acquisition of powers, relationship with other organizations and institutions, relationship with other organizations and institutions, quality assurance guidelines and other relevant matters. The Ordinances shall encompass admission procedure and fees, procedure of conduct of examinations, administration of Gifts, Endowments and Benefactions and award of Scholarships, Fellowships etc, control, supervision and inspection of teaching programmes of constituent institutions, convocation and award of degrees, management of overseas Affairs, residences of staff and students and other relevant matters.

**Status:** The sub-committee constituted by the Senate has submitted drafts of the Statutes and Ordinances as **Annexure - 14**

**Proposal:** Members of the senate may please give their comments/suggestions in about three weeks time to the office of AcSIR so as to enable it to finalize these drafts and table the same at the next Senate meeting for its approval.