

**The 54th meeting of the School Board of the School of Sciences was held on 3rd Sept., 2015 at 11.00 a.m. in the Conference Room of Block D, IGNOU, Maidan Garhi, New Delhi – 110068.**

The following members were present:

1. Prof. Vijayshri, Director (SOS), Chairperson
2. Prof. H. B. Srivastava, Centre of Advanced Study in Geology, Banaras Hindu University
3. Prof. R.P. Tandon, Former Head, Dept. of Physics and Astrophysics, Univ. of Delhi
4. Prof. Rajender Parsad, Indian Agricultural Statistics Research Institute
5. Prof. Seemi Farhat Basir, Jamia Millia Islamia
6. Prof. M. Parhar, STRIDE, IGNOU
7. Dr. Manoj Kulshreshtha, SOET, IGNOU
8. Prof. S.C. Garg, SOS, IGNOU
9. Prof. B.S. Saraswat, SOS, IGNOU
10. Prof. Parvin Sinclair, SOS, IGNOU
11. Prof. Sunita Malhotra, SOS, IGNOU
12. Prof. Poornima Mital, SOS, IGNOU
13. Prof. Geeta Kaicker, SOS, IGNOU
14. Prof. Jaswant Sokhi, SOS, IGNOU
15. Prof. Neera Kapoor, SOS, IGNOU
16. Prof. Sujatha Varma, SOS, IGNOU
17. Prof. S.R. Jha, SOS, IGNOU
18. Prof. B. I. Fozdar, SOS, IGNOU
19. Prof. Javed A. Farooqi, SOS, IGNOU
20. Prof. Amrita Nigam, SOS, IGNOU
21. Prof. M.S. Nathawat, SOS, IGNOU
22. Prof. Shubha Gokhale, SOS, IGNOU
23. Dr. Bano Saidullah, SOS, IGNOU
24. Dr. S. Venkataraman, SOS, IGNOU
25. Dr. Kamalika Banerjee, SOS, IGNOU
26. Dr. Vijay Kumar Baraik, SOS, IGNOU
27. Dr. Sanjay Gupta, SOS, IGNOU
28. Dr. Seema Kalra, SOS, IGNOU
29. Dr. Kakoli Gogoi, SOS, IGNOU

Prof. S. Kumaresan, Prof. K. Barik, Prof. T. K. Jena and Shri Prabhat Kumar Sangal could not attend the meeting.

At the outset, the Chairperson welcomed the members of the School Board. Thereafter, the following items on the agenda were deliberated:

**Item No. 1: To confirm the minutes of the 53rd meeting of the School Board of the School of Sciences held on 6th July, 2015 and to note the action taken thereon.**

SB 54.1.1 The Minutes of the 53rd meeting of the School Board were confirmed as circulated and the Action Taken Report was noted by the School Board.

SB 54.1.2 A copy of the confirmed Minutes of the 53rd meeting of the School Board of the School of Sciences held on 6th July, 2015 (without Annexures) and the Action Taken Report are placed at **Annexures 1 and 2**, respectively.

**Item No. 2: Matters arising from the minutes.**

SB 54.2.1 The Chairperson placed the request from the Director Education (Akashdeep) for including Mathematics in the course offerings for the consideration of the School Board (**Annexure 3**).

SB 54.2.2 It was decided that a letter be sent to Director Education (Akashdeep) seeking information on the topics taught in Mathematics to the Associate Degree Holders in Science registered in the Akashdeep scheme since the syllabi of courses provided earlier did not give any such details. It was also decided that along with this letter, the list of all Mathematics courses offered in the B. Sc. Programme and their syllabi, as well as the syllabi of the Mathematics course entitled Mathematical Methods, the physics courses entitled Mathematical Methods in Physics-I, Mathematical Methods in Physics-II and Mathematical Methods in Physics-III may also be sent. The response of the Director Education (Akashdeep) will then be examined by the School Board.

**Item No. 3: To confirm the Minutes of the 13th Meeting of the Standing Committee of the School Board of the School of Sciences held on Aug. 19, 2015.**

SB 54.3.1 The Minutes of the 13th meeting of the Standing Committee of the School Board held on Aug. 19, 2015 were placed before the School Board for consideration and confirmation.

SB 54.3.2 The Minutes of the 13th meeting of the School Board Standing Committee were confirmed by the School Board as such. A copy of the confirmed Minutes (with its Annexures) is placed at **Annexure 4**.

**Item No. 4: To consider and approve the phase zero form for the revised Certificate Programme in Laboratory Techniques (CPLT).**

SB 54.4.1 The Phase Zero Form for the revised Certificate Programme in Laboratory Techniques (CPLT) was placed before the School Board for consideration and approval (**Annexure 5**).

SB 54.4.2 The Convenor of the Programme Coordination Team, Dr. Lalita S. Kumar, was invited by the Chair to present the salient features of the Programme. The Programme Coordination team comprising Dr. Lalita S. Kumar, Prof. S. R. Jha and Prof. Neera Kapoor responded to the queries raised by the members on various aspects of the revised programme, e.g. eligibility criteria, nature of operational difficulties, feedback analysis, examples of home exercises, qualifications of the academic counsellors, evaluation strategies of various courses.

SB 54.4.3 After detailed deliberations, the Phase Zero Form for the revised Certificate Programme in Laboratory Techniques (CPLT) was approved with the following modifications:

1. In Point 10(c)(i) of the Phase Zero Form, the qualifications M.Sc. in Biosciences be replaced by M.Sc. in Botany/Zoology/Biotechnology.
2. In Column 11 of Table 1, the numbers may be expressed in appropriate units.

The revised Phase Zero Form approved by the School Board is placed at **Annexure 6**.

**Item No. 5: To consider and recommend the names of Prof. S.S. Hasan (Retd.), as course writer for the theory and lab components of LT-01 and LT-02 of the revised CPLT and Dr. S. Taneja (Retd.), School of Sciences, IGNOU, as Course Writer for the theory and lab components of the LT-01 course of the revised CPLT.**

SB 54.5.1 The names of the following course writers were recommended by the School Board for various courses of the revised CPLT for the approval of the Vice-Chancellor:

**I. Good Laboratory Practices (Theory)**

1. Prof. S.S. Hasan (Retd.), School of Sciences, IGNOU.
2. Dr. S. Taneja (Retd.), School of Sciences, IGNOU.

**II. Good Laboratory Practices: Basic Exercises (Lab)**

1. Prof. S.S. Hasan (Retd.), School of Sciences, IGNOU.
2. Dr. S. Taneja (Retd.), School of Sciences, IGNOU.

**III. Laboratory Techniques in Biology (Theory)**

1. Prof. S.S. Hasan (Retd.), School of Sciences, IGNOU.

**IV. Basic Experiments in Biology (Lab)**

1. Prof. S.S. Hasan (Retd.), School of Sciences, IGNOU.

**V. Laboratory Techniques in Physics (Theory)**

1. Dr. R. Venkatraman (Retd.), K. M. College, University of Delhi
2. Dr. Pramada Lele, PGT (Physics), Springdales School, Delhi

**VI. Basic Experiments in Physics (Lab)**

1. Dr. R. Venkatraman (Retd.), K. M. College, University of Delhi
2. Dr. Pramada Lele, PGT (Physics), Springdales School, Delhi

**Item No. 6: To consider and approve the format, pattern and evaluation methodology of the Continuous Assessment and Term-end examination of the Lab courses of the programme “Post Graduate Diploma in Applied Statistics (with specialisation in Industrial Statistics)”.**

SB 54.6.1 The Minutes of the Expert Committee meeting containing recommendations on the format, pattern and evaluation methodology of the Continuous Assessment and Term-end examination of the Lab courses of the programme “Post Graduate Diploma in Applied Statistics (with specialisation in Industrial Statistics)” were placed before the School Board (**Annexure 7**).

SB 54.6.2 After detailed deliberations, the format, pattern and evaluation methodology of the Continuous Assessment and Term-end examination of the Lab courses of the programme “Post Graduate Diploma in Applied Statistics (with specialisation in Industrial Statistics)”, as proposed by the Expert Committee and given in the Minutes, were approved by the School Board with the following modification in the recommendation given at the last but one bullet (Page 2 of the Minutes):

- All answer sheets should be evaluated by the external examiner on the basis of the marking scheme given for the paper. The external examiner should also conduct the viva-voce.

**Item No. 7: To consider and recommend the strategies for implementation of Choice Based Credit System of UGC from January/July, 2016.**

SB 54.7.1 The School Board was informed that the Academic Council in its 64<sup>th</sup> meeting held on July 10, 2015 approved the adoption of Choice Based Credit System Scheme of UGC and directed the Schools to devise strategies for implementation of CBCS from coming Academic session (Jan/July 2016) in a phased manner. The relevant extracts of the Minutes of the 64<sup>th</sup> meeting of the Academic Council vide AC 64.20.2 were circulated and are placed at **Annexure 8** for direction of the School Board so that implementation of CBCS from coming Academic session (Jan/July 2016) can be done within the specified time frame.

SB 54.7.2 After detailed deliberations, the School Board approved the following strategy for implementation of the CBCS from the academic session of July 2016:

1. The B.Sc. Programme in accordance with the CBCS of UGC should be offered in July 2016 after following due statutory processes and procedures as per the revision policy approved by the Academic Council.
2. There should be no advertisement for the BSc programme for the January session and to optimise workload, students enrolled in the past few years should be granted credit transfer as per University policy.
3. Preparations for offering B.Sc. (Hons.) programme in various disciplines of the School of Sciences may be initiated and the programmes may be offered in a phased manner in accordance with the CBCS of UGC.

4. Meetings of the Programme Expert Committees of B.Sc. and B.Sc. (Hons.) in various disciplines approved by the School Board may be held at the earliest and their recommendations may be placed in the next School Board meeting for approval.
5. Course Design and Development Committee meetings may be held for various courses of these programmes, if need be.

The difficulties in implementation of CBCS for B.Sc. may be identified and the recommendations of the Expert Committees on those issues may be placed in the School Board.

**Item No. 8: To consider and approve the change of nomenclature of the Bachelor’s Degree in Science from ‘Major’ to ‘Hons.’ and suggest measures for implementation in the light of UGC-CBCS scheme adopted by IGNOU.**

SB 54.8.1 The School Board was informed that the Academic Council in its 64<sup>th</sup> meeting held on July 10, 2015 had taken the decision that “process for the change of nomenclature of the Bachelors Degree of IGNOU from “Major” to “Honours” should be initiated so that it becomes effective from the next academic session.” The Council also directed “the Schools to make changes in a time bound manner and seek the approval from their respective School Boards so that this shifting can be made smoothly within the specified time frame.”

The relevant extracts of the Minutes of the 64<sup>th</sup> meeting of the Academic Council vide 64.23.2 are placed at **Annexure 9** for consideration, approval of the nomenclature and further direction of the School Board so that this shifting can be made smoothly within the specified time frame.

SB 54.8.2 The School Board approved the change of nomenclature of the Bachelor’s Degree in Science from ‘Major’ to ‘Hons.’, which would be implemented in the light of the CBCS of UGC. In view of the decisions taken vide SB 54.7.1 and 54.7.2, the School Board recommended that till such time as B.Sc. (Hons.) programmes of the School of Sciences were offered in accordance with the CBCS of UGC, the School may offer only the B.Sc. Programme under the CBCS-UGC.

**Item No. 9: To consider and approve the names of experts for the Expert Committee for B.Sc. Programme under the UGC-CBCS Scheme.**

SB 54.9.1 The names of the following Experts for the Programme Expert Committee for B.Sc. under the UGC-CBCS Scheme were approved by the School Board:

S. No.	Name	Address	Tel. No.; e-mail id
1.	Prof. Ashok Bhatnagar (Retd.)	Dept. of Botany, University of Delhi, Delhi – 110007	9810376885
2.	Prof. Harsh Nayyar	Chairperson, Dept. of Botany, Panjab University, Chandigarh – 160014.	0712-2779510, 09815905976 (M) chairman.botany@pu.ac.in
3.	Prof. Kailash Agarwal	Head, Dept. of Botany, University of Rajasthan, Jaipur-302004	0141-2711654 (O), 09414306665 uorbotany@gmail.com

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4.	Prof. N.N. Tripathi (Retd.)	Dept. of Botany, Deen Dayal Upadhyay, Gorakhpur University, Gorakhpur-273009	<a href="mailto:nijendratripathi@rediffmail.com">nijendratripathi@rediffmail.com</a> <a href="mailto:nijendratripathi@gmail.com">nijendratripathi@gmail.com</a> 09450883779
5.	Prof. Jagdamba Singh	Dept. of Chemistry, Allahabad University, Allahabad	9415218507; Dr.jdsau@gmail.com
6.	Prof. Mihir Chaudhary	Vice Chancellor, Tezpur University, Tezpur – 784028, Assam	9954449454; mkc@tezu.ernet.in
7.	Prof. Rita Kakkar	Dept. of Chemistry, University of Delhi, Delhi	9810120508: rkakkar@chemistry.du.ac.in, ritakakkar10@gmail.com
8.	Prof. Sudhir N. Limaye	Dept. of Chemistry, Hari Singh Gaur University, Sagar, MP	07582265750; 09424451130 snl222@yahoo.co.in
9.	Prof. A. K. Ghatak (Retd.)	Dept. of Physics, IIT, Delhi, New Delhi	9810493018
10.	Prof. Vipin Srivastava	School of Physics, University of Hyderabad, Hyderabad - 500 046	+91 40 23134364(O) / 23137210 23010138 (R); <a href="mailto:vpssp@uohyd.ernet.in">vpssp@uohyd.ernet.in</a> ;
11.	Prof. R.M. Mehra	Head, Department of Physics, Sharda University,	
12.	Dr. I.J. Gupta	Dept. of Physics, Hindu College, University of Delhi, Delhi-07	
13.	Prof. Neeta Sehgal	Head, Dept. of Zoology, University of Delhi, Delhi-07	9810748839
14.	Prof. Veena Tandon (Retd.)	Dept. of Zoology, NEHU, Shillong – 7893022	
15.	Prof. Jagbeer Singh	Head, Dept. of Zoology & Environmental Sciences, Punjabi University, Patiala-147002	<a href="mailto:prjagvir2005@gmail.com">prjagvir2005@gmail.com</a> 09779457481
16.	Prof. P.K. Goyal	Head, Dept. of Zoology, University of Rajasthan, Jaipur-302004	0141-2711158, 08387841051 (M) Pkgoyal2002@gmail.com
17.	Prof. R. Bhatia	Indian Statistical Institute, Delhi	41493943; <a href="mailto:rbh@isid.ac.in">rbh@isid.ac.in</a>
18.	Prof. M. Manickam	Director, Kerala School of Mathematics Kozhikode, Kerala	09444854631; murugumanick@gmail.com
19.	Prof. A.R. Aithal	Dept. of Mathematics University of Mumbai, Mumbai	022-26528871, <a href="mailto:aithal86@gmail.com">aithal86@gmail.com</a>
20.	Prof. T. Amaranath	School of Mathematics and Statistics, University of Hyderabad, Hyderabad-46	040 23134053, 09866104053 <a href="mailto:amaranath.t@gmail.com">amaranath.t@gmail.com</a>
21.	Prof. S.C. Garg	SOS, IGNOU	29572840
22.	Prof. B. S. Saraswat	SOS, IGNOU	29572835
23.	Prof. Parvin Sinclair	SOS, IGNOU	29572820
24.	Prof. Geeta Kaicker	SOS, IGNOU	29572839
25.	Prof. Jaswant Sokhi	SOS, IGNOU	29572850

SB 54.9.2 The School Board suggested that two external experts and one internal Expert from each Discipline involved in the BSc programme, viz. Botany, Chemistry, Mathematics, Physics and Zoology may be invited to the meetings of the

Programme Expert Committee for B. Sc. The Programme Expert Committee would give its recommendations on the overall structure, combinations of Disciplines, list of courses and broad content coverage in each course for the B. Sc. programme under the CBCS of UGC.

**Item No. 10: To consider and approve the names of experts for the following Expert Committees under the UGC-CBCS Scheme:**

- i) Expert Committee for Biochemistry for B.Sc. (Hons.) in Biochemistry**
- ii) Expert Committee for Chemistry for B.Sc. (Hons.) in Chemistry**
- iii) Expert Committee for Mathematics for B.Sc. (Hons.) in Mathematics**
- iv) Expert Committee for Physics for B.Sc. (Hons.) in Physics**
- v) Expert Committee for Geography for B.Sc. (Hons.) in Geography**

SB 54.10.1 It was decided that each Expert Committee would comprise ten Experts. The names of the following Experts for the Programme Expert Committees for B.Sc. (Hons.) Programme in Biochemistry, Chemistry, Mathematics, Physics and Geography under the UGC-CBCS Scheme, were approved by the School Board:

**i) Expert Committee for Biochemistry for B.Sc. (Hons.) in Biochemistry**

S. No.	Name	Address	Tel. No.; e-mail id
1.	Prof. Bechan Sharma	Dept. of Biochemistry University of Allahabad, Allahabad-211002	+91-9415715639; bechansharma@gmail.com
2.	Prof. Reena Gupta	Dept. of Biotechnology, Himachal Pradesh University, Shimla	94184-62552; reenagupta_2001@yahoo.com
3.	Prof. Seemi Farhat Basir	Dept. of Bio Sciences, Jamia Milia Islamia, New Delhi	09810597159; <a href="mailto:seemifb@gmail.com">seemifb@gmail.com</a> , <a href="mailto:sbasir@jmi.ac.in">sbasir@jmi.ac.in</a>
4.	Prof. Prahlad Ghosh	Delhi University, South Campus, New Delhi- 110021	9810841488; 24111968; <a href="mailto:pcghose@gmail.com">pcghose@gmail.com</a>
5.	Dr. Suneeta Joshi	Associate Professor, Dept. of Biochemistry Daulat Ram College, Delhi University	09953150114 sunjoshi5@yahoo.com
6.	Prof. Surya S Singh	Dept. of Biochemistry, Osmania. University, Hyderabad-500007	+91-9848450411; suryasingh.oubioc@gmail.com
7.	Prof D.V. Devaraju	Dept of Biochemistry, Bangalore University, Central College Campus, Bangalore-560001	080-22961345, 9886494428 <a href="mailto:devaraju@bub.ac.in">devaraju@bub.ac.in</a>
8.	Prof. Donkumar Syiem	Head, Department of Biochemistry, North-Eastern Hill University, Shillong	272 2101/ 272 2102 <a href="mailto:donkumar@nehu.ac.in">donkumar@nehu.ac.in</a>
9.	Prof. Sanjeev Puri	Stem Cell and Tissue Engineering, University Institute of Engineering and Technology, Panjab University, Chandigarh-160014	0172- 253497; s_puri@pu.ac.in
10.	Prof. Ranjit K. Mishra	Dept. of Biochemistry, University of Lucknow, Lucknow-226007	9415789199 rkm399@lkouniv.ac.in, rkm399@gmail.com

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All Faculty members of the Biochemistry Discipline Group from the School of Sciences.

**ii) Expert Committee for Chemistry for B.Sc. (Hons.) in Chemistry**

S. No.	Name	Address	Tel. No.; e-mail id
1.	Prof. Rita Kakkar	Dept. of Chemistry, University of Delhi, Delhi	9810120508; rkakkar@chemistry.du.ac.in, ritakakkar10@gmail.com
2.	Prof. Zafar Siddiqui	Dept. of Chemistry, Aligarh Muslim University, Aligarh	9219401230, 9411803461 zafarasiddiqui@gmail.com
3.	Prof. H.S.P. Rao	Dept. of Chemistry, Pondicherry University, Pondicherry	9443264222; Hspr.che@poundiuni.edu.in, hspr@yahoo.com
4.	Prof. S.K. Mehta	Dept. of Chemistry, Panjab University, Chandigarh	0172-2534423; 09417786061 skmehta@pu.ac.in
5.	Prof. Gurmeet Singh	Dept. of Chemistry, University of Delhi, Delhi	9810390640; : Gurmeet123@yahoo.com, gurmeet123@gmail.com
6.	Prof. Sudhir N. Limaye	Dept. of Chemistry, Hari Singh Gaur University, Sagar, MP	07582265750; 09424451130 snl222@yahoo.co.in
7.	Prof. Jagdamba Singh	Dept. of Chemistry, Allahabad University, Allahabad	9415218507; Dr.jdsau@gmail.com
8.	Prof. Mihir Chaudhary	Vice Chancellor, Tezpur University, Tezpur – 784028, Assam	9954449454; mkc@tezu.ernet.in
9.	Prof. J.M. Khurana,	Dept. of Chemistry, University of Delhi, Delhi	9810651142; jmkhurana@chem.du.ac.in; jmkhurana1@yahoo.co.in
10.	Prof. Nadeem Siddiqui	Dept. Of Pharmaceutical Chemistry, Jamia Hamdard, Hamdard Nagar, New Delhi 110062	9818525963; Nadeems_03@yahoo.co.in

All Faculty members of the Chemistry Discipline Group from the School of Sciences.

**iii) Expert Committee for Mathematics for B.Sc. (Hons.) in Mathematics**

S. No.	Name	Address	Tel. No.; e-mail id
1.	Prof. R. Bhatia	Indian Statistical Institute, Delhi	41493943 (O), rbh@isid.ac.in
2.	Prof. T. Amaranath	School of Mathematics and Statistics University of Hyderabad, Hyderabad-500046	040 23134053, 09866104053 amaranath.t@gmail.com
3.	Prof. A.R. Aithal	Department of Mathematics University of Mumbai	022-26528871, aithal86@gmail.com
4.	Prof. M. Manickam	Director, Kerala School of Mathematics, Kozikhode, Kerala	09444854631, murugumanick@ksom.res.in, murugumanick@gmail.com
5.	Prof. V. Krishna Kumar	Department of Mathematics Calicut University	09995260983, vellagkraishna@yahoo.com



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6.	Dr. Sunita Gupta	Department of Statistics Lady Shri Ram College, University of Delhi	9871608909, sunitagupta@lsr.edu.in
7.	Prof. Amber Habib	Department of Mathematics Shiv Nadar University, Greater Noida, UP	9871681311, amber.habib@snu.edu.in
8.	Dr. V.V. Acharya	Department of Mathematics Ferguson College, Pune – 411004	09767949407, vvacharya@yahoo.com, vvacharya@gmail.com
9.	Prof. Geetha Venkataraman	Dept. of Mathematical Sciences Ambedkar University, Delhi	9350916857, geetha@aud.ac.in
10.	Prof. Uttara Naik Nimbalkar (Retd.)	Dept. of Statistics, University of Pune	<a href="mailto:uvnaik@stats.unipune.ernet.in">uvnaik@stats.unipune.ernet.in</a>
All Faculty members of the Mathematics Discipline Group from the School of Sciences.			

**iv) Expert Committee for Physics for B.Sc. (Hons.) in Physics**

S. No.	Name	Address	Tel. No.; e-mail id
1.	Prof. A. K. Ghatak (Retd.)	Dept. of Physics, IIT, Delhi, New Delhi-17; Res.: D - 42, SFS, Hauz Khas, New Delhi - 17	9810493018
2.	Prof. Pankaj Saran	Dept. of Physics, Jamia Millia Islamia, Jamia Nagar, New Delhi-25	011- 26984631 psharan@jmi.ac.in; pankajsharan@gmail.com
3.	Prof. S.K. Muthu (Retd.)	Dept. of Physics & Astrophysics, University of Delhi, Delhi – 110007; <b>Res:</b> Tower Apartments, SD – 281, Pitampura, New Delhi - 110034	9810847848
4.	Prof. T.R. Seshadri	Dept. of Physics & Astrophysics, University of Delhi, Delhi – 110007; <b>Res:</b> Tower Apartments, SD – 281, Pitampura, New Delhi - 110034	9810847848
5.	Prof. Prabhakar Singh	Dept. of Physics, IIT, BHU, Varanasi	
6.	Prof. G.S. Singh	Dept. of Physics, IIT, Roorkee	
7.	Prof. G. Chandrasekaran	Dept. of Physics, School of Physical, Chemical and Applied Sciences, Pondicherry University, Pondicherry - 605014	+91- 413 - 2654402 chandra.phy@pondiuni.edu.in
8.	Prof. Tapas Ranjan Midya	Dept. of Physics, Jadavpur University, 188 Raja S.C. Mallik Road, Kolkata-700032	033- 24572763
9.	Prof. Ranjana Prakash	Dept. of Physics, University of Allahabad, Allahabad – 211002	0532-2460993; 9794169391
10.	Dr. Vijay H.Raybagkar (Retd.)	Dept. of Physics, N. Wadia College, Pune – 411006 <b>Res:</b> 202, Bhoop Apartments, 9A/1, Deccan College Road, Yerwada, Pune - 411006	09822622072
All Faculty members of the Physics Discipline Group from the School of Sciences.			

**v) Expert Committee for Geography for B.Sc (Hons.) in Geography**

S. No.	Name	Address	Tel. No.; e-mail id
1.	Prof. M. C. Sharma	Centre for the Study of Regional Development (CSR D), J N U, Delhi	+91-9818772842, milapsharmain@yahoo.co.in
2.	Prof. Sachidanand Sinha	Centre for the Study of Regional Development (CSR D), J N U, Delhi	9868354019, Sachi57sinha@gmail.com
3.	Prof. R.B. Singh	Dept. of Geography, Delhi School of Economics, Univ. of Delhi, Delhi	9971950226; rbsgeo@hotmail.com
4.	Prof. H.S Sharma (Retd.)	Univ. of Rajasthan; A-3, Shanti Niketan Colony, Kishan Marg, Tonk Road, Jaipur-303015	+919983349022; pachhora1@yahoo.com
5.	Prof. M. H. Qureshi	AM Khwaja Chair, Jamia Millia Islamia, New Delhi-110025	9312637470 mhqureshi42@gmail.com
6.	Prof. H. Ramachandran	(Retd.); Delhi School of Economics, DU; Res.: C-1675, Palam Vihar, Gurgaon-122017	9810170308 hariharan_ramachandran@hotmail.com
7.	Prof. N R Dash Professor	Head, Department of Geography, The M S University of Baroda, Pratapgunj, Vadodara, Gujarat- 390002	09427837149 n_r_dash@yahoo.com
8.	Prof. Vishwas Shripad Kale	Department of Geography University of Pune, Pune- 411 007.	+91 20 25601365 vskale@unipune.ac.in
9.	Prof. R. P. B. Singh	Dept. of Geography, BHU, Varanasi-221005	0542-2575843; 09838 119474 ranapbs@gmail.com
10.	Prof. Devendra Kumar Nayak	Dept. of Geography, NEHU, Shillong-793022	2550308, 9436103290 dknayak@nehu.ac.in, dknak@rediffmail.com
All Faculty members of Geography Discipline Group from the School of Sciences.			

The Programme Expert Committee for the respective B. Sc. (Hons.) programme listed above would give its recommendations on the overall structure, combinations of Disciplines, list of courses and broad content coverage in each course for the B. Sc. programme in accordance with the CBCS of UGC.

**Item No. 11: To consider and approve the names of the experts for the Course Design and Development Committees for the following courses under the UGC-CBCS Scheme:**

**i) Botany**

- i) Biodiversity
- ii) Plant Ecology and Taxonomy

**ii) Chemistry**

- i) Atomic Structure, Bonding, General Organic and Aliphatic Hydrocarbons
- ii) Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I

iii) **Mathematics**

- i) Differential Calculus/ Calculus
- ii) Differential Equations

iv) **Physics**

- i) Mechanics
- ii) Electricity, Magnetism and EMT

v) **Zoology**

- i) Animal Diversity
- ii) Comparative Anatomy and Developmental Biology of Vertebrates

SB 54.11.1 It was decided that the lists of Experts for Course Design and Development Committees for the courses Animal Diversity, Comparative Anatomy and Developmental Biology of Vertebrates be expanded by including more names and names of Experts for the Course Design and Development Committee for Immunology recommended by members of the School Board from the Life Sciences Faculty may also be included. The names of the following Experts for the Course Design and Development Committees for the courses listed below under the UGC-CBCS Scheme, were approved by the School Board:

a) **Botany**

**Biodiversity**

- 1. Dr. Swadesh Taneja (Retd.), School of Sciences, IGNOU.
- 2. Dr. Sneha Chopra (Retd.), Department of Botany, Delhi University.
- 3. Prof. Jaswant Sokhi, School of Sciences, IGNOU.
- 4. Prof. Amrita Nigam, School of Sciences, IGNOU.

**Plant Ecology and Taxonomy**

- 1. Prof. A.K. Bhatnagar (Retd.), Department of Botany, Delhi University.
- 2. Dr. Ajit K Kavathekar (Retd.), Department of Botany, Venkateswara College, Delhi University.
- 3. Prof. Jaswant Sokhi, School of Sciences, IGNOU.
- 4. Prof. Amrita Nigam, School of Sciences, IGNOU.

b) **Chemistry**

**Atomic Structure, Bonding, General Organic and Aliphatic Hydrocarbons**

- 1. Prof. H.B. Singh  
Retired from (University of Delhi), 155 Pocket-I, Jasola Vihar,  
New Delhi  
Mob: 9899818550
- 2. Prof. A.K. Bakshi  
Dept. of Chemistry, University of Delhi, New Delhi-110007  
Mob: 9818352820, 9793760000
- 3. Prof. Amier Azam  
Dept. of Chemistry, Jamia Milia Islamia, New Delhi-110025

- Mob: 9818963639
4. Prof. Tabrez Alam  
Dept. of Chemistry, Jamia Milia Islamia, New Delhi-110025  
Mob: 9868120985
  5. Prof. J.M. Khurana  
Dept. of Chemistry, University of Delhi, New Delhi-110007  
Mob: 9810651142

**Chemical Energetics, Equilibria & Functional Group Organic Chemistry**

1. Dr. K.L. Kapoor  
Dept of Chemistry, Hindu College, University of Delhi  
New Delhi-110007  
Mob: 9899261608
2. Prof. Rita Kakkar  
Dept. of Chemistry, University of Delhi, New Delhi-110007  
Mob: 9810120508
3. Dr. Toqueer Ahmad  
Dept. of Chemistry, Jamia Milia Islamia, New Delhi-110025  
Mob: 9958369786
4. Dr. Vijay Sarda  
(Retired from Zakir Hussain College)  
1B/18C, Ashok Vihar, Phase-I, New Delhi-110052  
Mob: 9871751112
5. Dr. Rakesh Parasar  
Dept. of Chemistry, University of Delhi, New Delhi-110007  
Mob: 9868496773

c) **Mathematics**

**Differential Calculus/ Calculus**

1. Dr. Asha Mathur (Retd.)  
Lady Sriram College, University of Delhi, New Delhi
2. Dr. Manik D. Patwardhan (Retd.)
3. Dr. V.V. Acharya, Ferguson College, Pune
4. Dr. Shashikiran (Retd.), Department of Mathematics  
Matasundri College, University of Delhi, New Delhi

**Differential Equations**

1. Dr. K.D. Nanda  
Dyal Singh College, University of Delhi, New Delhi
2. Dr. Rashmi Bhardwaj  
School of Basic and Applied Sciences, G.G.S. Indraprastha University,  
Delhi 110006
3. Dr. Shobha Bagai, University of Delhi, New Delhi

d) **Physics**

**Mechanics**

1. Dr. Naresh Kumar (Retd.)

- Associate Professor, Hindu College, University of Delhi, Delhi-110007
2. Dr. Pragati Ashdhir  
Associate Professor, Hindu College, University of Delhi, Delhi-110007
3. Prof. S. C. Garg, SOS, IGNOU
4. Prof. Vijayshri, SOS, IGNOU
5. Dr. S. Lamba, SOS, IGNOU

**Electricity, Magnetism and EMT**

1. Dr. B.V.G.Rao  
Associate Professor, Sri Venkateshwara College, University of Delhi,  
Delhi – 110021
2. Prof. Vijayshri, SOS, IGNOU
3. Prof. S R Jha, SOS, IGNOU

e) **Zoology**

**Animal Diversity**

1. Dr Gurdeep Singh Virdi (Retd.) Shri Guru Teg Bahadur Khalsa College,  
Delhi University.
2. Dr. Bharati Sarkar (Retd.) Dept. of Zoology Maitreyi College,  
University of Delhi.
3. Dr. Rajni Arora, Associate Professor, Dept. of Zoology, Swami  
Shardhanand College, University of Delhi, Delhi-110036
4. Prof. S. S. Hasan (Retd.) School of Sciences, IGNOU.
5. Prof. Geeta Kaicker, School of Sciences, IGNOU.
6. Prof. Neera Kapoor, School of Sciences, IGNOU.
7. Dr. Bano Saidullah School of Sciences, IGNOU.

**Comparative Anatomy and Developmental Biology of Vertebrates**

1. Prof. Shweta Saran School of Life Sciences, JNU.
2. Dr. Anita Grover, Dept. of Zoology, Zakir Hussain College, Delhi Univ.
3. Dr. Tanushee Saxena Department of Zoology, Swami Shradhanand  
College, Delhi University.
4. Dr. Madhu Madan, Associate Prof. Department of Zoology, Ramjas  
College, University of Delhi, Delhi-110005
5. Dr. Shashi Chandra Kant, Associate Professor, Department of Zoology  
Zakir Husain College, University of Delhi, Delhi-110023
6. Prof. S. S. Hasan (Retd.) School of Sciences, IGNOU.
7. Prof. Geeta Kaicker, School of Sciences, IGNOU.
8. Prof. Neera Kapoor, School of Sciences, IGNOU.
9. Dr. Bano Saidullah School of Sciences, IGNOU.

**Immunology**

1. Dr. Ravi Tuteja, Associate Professor, Dept. of Zoology, Acharya Narendra Dev College, University of Delhi, Delhi-110019
2. Dr. Kamal Kumar Gupta, Associate Professor, Dept. of Zoology, Deshbandhu College, University of Delhi, Delhi-110019
3. Dr. Neerja Sud, Associate Professor, Dept. of Zoology, Dyal Singh College, University of Delhi, Delhi-110003
4. Dr. Neelam Gandhi, Associate Professor, Department of Zoology, Hans Raj College, University of Delhi, Delhi-110007
5. Prof. Seemi Farhat Basir, Department of Bio Sciences, Jamia Millia Islamia, University of Delhi, Delhi-110025
6. Prof. Murli Dhar (Retd.), Department of Zoology, University of Delhi
7. Prof. Madhu Kumar (Retd.), Department of Zoology, University of Rajasthan, Jaipur, Rajasthan-302004
8. Dr. Lalit Garg, National Institute Immunology, Aruna Asif Ali Marg Jawaharlal Nehru University, New Delhi 110067
9. Prof. Asha Sharma (Retd.), Department of Zoology, University of Rajasthan, Jaipur-3002004
10. Dr. Swati Omanwar, Women Scientists program DST, School of Sciences, IGNOU

**Item No. 12: To consider and approve the Minutes of the meeting of the Committee constituted by the School Board to devise a framework for organising research work in the School of Sciences and to frame guidelines for assessing the performance of the candidates in the interview for admission to PhD programmes being offered by the School.**

SB 54.12.1 In its 52nd Meeting held on May 8, 2015, the School Board had set up the same Committee to devise a framework for organising research work in the School of Sciences and to frame guidelines for assessing the performance of the candidates in the interview for admission to PhD programmes being offered by the School. The Minutes of the meeting of the Committee held on Aug. 20, 2015 were placed for the approval of the School Board (**Annexure 10**).

SB 54.12.2 The School Board approved the Minutes of the meeting of the Committee held on Aug. 20, 2015 placed at **Annexure 10** with the following modifications (given in bold face):

***Under B. Bullet No. 3:***

“The Doctoral Committee for each Ph. D. scholar may list a maximum of four experts ***preferably from Delhi***, in the specific research area. Accordingly, the panel of Experts for Doctoral Committee for each Discipline should be resubmitted for the approval of the School Board. It is preferable that the same expert be present for all the Doctoral Committee meetings for reviewing the progress of a particular scholar. However in case the expert is unavailable for some reasons, another expert from the same panel in the related area of research may be invited for the Doctoral Committee meeting.”

***Under C. Bullet No. 4:***

If a supervisor goes on leave, on deputation, retires or is unable to supervise his/her research scholar, an internal faculty member may be assigned to the scholar as a **joint/sole supervisor on the recommendation of the Doctoral Committee**. This additional scholar should be over and above the existing seats under any faculty member within the provisions of Research ordinance.

***Under E. Bullet No. 1:***

If the research scholar does not complete the pre- Ph. D course work in the stipulated time, his/her admission may be cancelled. **Any exceptions may be dealt with on a case to case basis on the recommendations of the Doctoral Committee.**

***Under E. The following be added:***

- At least C Grade would be required for successful completion of each Pre-Ph.D. course.

**Item No. 13: To consider and approve the minutes of the Doctoral Committee Meetings of Chemistry held on 12th August, 2015 and 14th August, 2015.**

SB 54.13.1 The School Board was informed that meetings of the Doctoral Committee of Chemistry were held on 12th August, 2015 and 14th August, 2015 to review the progress of Ph.D. scholars in Chemistry. The minutes of the Doctoral Committee meetings in Chemistry were placed for the consideration and approval of the School Board.

SB 54.13.2 The School Board considered and approved the Minutes of the meetings of the Doctoral Committee of Chemistry held on 12th August, 2015 and 14th August, 2015 (**Annexures 11a and 11b**).

**Item No. 14: To consider and approve the minutes of the meeting of the Doctoral Committee for Mathematics held on 13/08/2015.**

SB 54.14.1 The School Board was informed that the meeting of the Doctoral Committee for Mathematics was held on 13/08/2015 to review the progress report of Ms. Hemlata Maurya, Ph.D. scholar in Mathematics Education. The minutes of the Doctoral Committee meeting were placed for the consideration and approval of the School Board.

SB 54.14.2 The School Board considered and approved the Minutes of the meeting of the Doctoral Committee for Mathematics held on 13/08/2015 (**Annexure 12**).

**Item No. 15: To consider and approve names of Experts for the Programme Expert Committee for PGDESD.**

SB 54.15.1 The names of the following experts for the Programme Expert Committee for the programme PG Diploma in Environment and Sustainable Development (PGDESD) were approved by the School Board:

1. Prof. C.K. Varshney (Retd.)  
JNU, New Delhi  
(H) 88, Vaishali, Pitampura, Delhi – 110088  
Tel: 27313388, Mob: 9818547904
2. Prof. Amita Singh  
Centre for Law and Governance, JNU, New Delhi-67,  
Tel: 26704761,  
amita@jnu.ac.in, amita.singh3@gmail.com
3. Dr. Sabiha Alam  
Assistant Professor,  
Academy of International Studies, Jamia Milia, New-Delhi- 110025.  
Phone: 26987582.



4. Prof. J.K. Garg  
University School of Environment Management  
GGs Indraprastha University, Sec 16C, Dwarka, New Delhi 110078  
91-11-25302371 Cell: 9313583845  
Email: gargjk@gmail.com, jkgarg@ipu.ac.in
5. Prof. R.B. Singh,  
Head, Dept. of Geography,  
Delhi School of Economics, University of Delhi, Delhi-110007  
Ph. 011-27666783. Mo: 09971950226  
Email: rbsgeo@hotmail.com, rbsgeo2@gmail.com
6. Dr. Shiv Dhar Singh  
Principal Scientist  
Centre for Environment Science and Climate Resilient Agriculture (CESCRA),  
Indian Agriculture Research Institute, Pusa, New Delhi-110012

All internal programme team members would also be members of the Programme Expert Committee for the PGDESD Programme.

The names of the following experts were also approved for the **Course Review Committee** of the course MED-007 entitled "Agriculture and Environment":

1. Dr. Usha Mina  
Sr. Scientist, Centre for Environment Science and Climate Resilient Agriculture (CESCRA), Indian Agriculture Research Institute, Pusa, New Delhi-10012
2. Dr. Shachi Shah  
Associate Professor, School of Agriculture, IGNOU, Maidan Garhi, Delhi-110068

**Item No. 16: To consider and approve the list of external examiners of Ms. Anushrita (Enrolment number 131637546), Ph.D. scholar in Life Sciences.**

SB 54.16.1 For the sake of confidentiality, the list of examiners of the Ph.D. thesis of Ms. Anushrita, Ph.D. Scholar (Enrolment No. 131637546) working under the joint supervision of **Prof. Neera Kapoor** and **Dr. Bhupender Nath Nagpal** on the topic "Health impact assessment of Indira Sagar Project and identification of kdr like mutations in *An. culicifacies*" was read out for the approval of the School Board.

**Details of Ms. Anushrita, Enrolment number: 131637546**

1. Enrolment number: **131637546**
2. Date of registration: **January, 2013**
3. Topic: **Health impact assessment of Indira Sagar Project and identification of kdr like mutations in *An. culicifacies*.**

Supervisor (Internal/External):

**Prof. Neera Kapoor  
School of Sciences, IGNOU  
and  
Dr. Bhupender Nath Nagpal**

**Scientist E, National Institute of Malaria Research  
Sector 8, Dwarka, Delhi-110077**

4. Date of Pre-PhD thesis submission seminar before Doctoral Committee:  
**30.07.2015**
5. No. of Publications:
  - i. "Health Impact Assessment- A Retrospective Study for a Prospective Approach in Madhya Pradesh, India" Journal-Austin Journal of Infectious Diseases, USA Vol-1, Issue-3-2014, Published-November, 2014.
  - ii. "A longitudinal Study on Malaria Transmission in Indira Sagar Dam Project, Madhya Pradesh, India" Journal- Indian Journal of Medical Research, (ICMR) Status- submitted (Ref IJMR\_655\_15).

SB 54.16 2 The School Board approved the list of examiners and advised that the approved list of examiners should not be circulated as a part of the Minutes but be forwarded confidentially to the Research Unit.

**Item No. 17: Any other items with the permission of the Chair.**

**Three items, as follows, were taken up under any other item:**

- (1) To consider and approve the list of Hindi translators for question papers for the Term-end Examination of all courses handled by the Mathematics faculty.**

SB 54.17.1 The following names of the Hindi translators for question papers for the Term-end Examination of courses handled by the Mathematics faculty were approved by the School Board of the School of Sciences.

1. Sh. Mahendra Shankar (Retd.)  
Department of Education in Science and Mathematics, NCERT  
Res.: DP-203, Maurya Enclave, Pitampura, Delhi – 110088  
27313625 (R); 9968093127 (M)  
(He is already approved as a translator for the course material, including assignments.)
  2. Ms. Jyoti Malik  
Translation Cell, School of Humanities, IGNOU, Maidan Garhi, New Delhi-68  
29572754 (O)
- (2) To recommend the name of Prof. Geeta Kaicker as Professor of the Discipline in the Moderation Boards of all courses of B.Sc. Life Sciences and Diploma in Aquaculture and pre Ph.D. courses of the Life Sciences.**

SB 54.17.2 The School Board was informed that Prof. S.S. Hasan retired on June 30, 2015 and the name of a Professor from Life Sciences had to be recommended in his place in the Moderation Boards of various courses of Life Sciences. The School Board recommended that in all Moderation Boards for the courses/programmes offered by the Life Sciences discipline, Prof. S.S. Hasan's name be replaced by the name of Prof. Geeta Kaicker and the modified lists of Members of the Moderation Boards of the courses be forwarded to the Vice-Chancellor for approval.

**(3) To recommend the names of Dr. Subhakant Mohapatra and Dr. Kakoli Gogoi as internal members of the Moderation Boards of all courses of PGDESD Programme and the name of Dr. Benidhar Deshmukh as internal member of the course MED-003 and Dr. Satya Raj as internal member of the course MED-008.**

SB 54.17.3 The School Board was informed that Dr. S. Mohapatra, Dr. B. Deshmukh, Dr. Kakoli Gogoi and Dr. Satya Raj had joined the Programme Team of the PGDESD Programme, and Dr. S. Mohapatra and Dr. Kakoli Gogoi were now joint coordinator of the programme. Therefore, their names needed to be included in the Moderation Boards of the courses in the Programme.

The School Board recommended that the names of Dr. Subhakant Mohapatra and Dr. Kakoli Gogoi be included as internal members of the Moderation Boards of all courses of PGDESD Programme. Further, the name of Dr. Benidhar Deshmukh be included as internal member of the course MED-003 and that of Dr. Satya Raj as internal member of the course MED-008. The modified lists of Members of the Moderation Boards may be forwarded to the Vice-Chancellor for approval.

The meeting ended with a vote of thanks to the Chair.

  
(Vijayshri)  
Chairperson

**List of Annexures**

Annexure 1	Minutes of the 53rd meeting of the School Board of the School of Sciences
Annexure 2	Action Taken Report on the minutes of 53rd meeting of the School Board of the School of Sciences
Annexure 3	Request from the Director Education (Akashdeep) for including Mathematics in the course offerings
Annexure 4	Minutes of the 13th meeting of the Standing Committee of the School Board held on Aug. 19, 2015 with Annexures
Annexure 5	Phase Zero Form for the revised Certificate Programme in Laboratory Techniques (CPLT)
Annexure 6	Phase Zero Form for the revised Certificate Programme in Laboratory Techniques (CPLT) approved by the School Board
Annexure 7	Minutes of the Expert Committee meeting for the programme Post Graduate Diploma in Applied Statistics (with specialisation in Industrial Statistics)
Annexure 8	Extracts of the Minutes of the 64 <sup>th</sup> meeting of the Academic Council vide AC 64.20.2
Annexure 9	Extracts of the Minutes of the 64 <sup>th</sup> meeting of the Academic Council vide 64.23.2
Annexure 10	Minutes of the meeting of the Committee constituted by the School Board to devise a framework for organising research work in the School of Sciences and to frame guidelines for assessing the performance of the candidates in the interview for admission to PhD programmes being offered by the School
Annexure 11a & 11b	Minutes of the meetings of the Doctoral Committee of Chemistry held on 12 <sup>th</sup> and 14 <sup>th</sup> August, 2015
Annexure 12	Minutes of the meeting of the Doctoral Committee for Mathematics held on 13-08-2015