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Minutes for the Thirteenth Meeting of the Board of Studies in Chemistry held on 27.02.2018 at 11:00 a.m. at the IISU Campus, Jaipur

In the thirteenth BOS meeting, the following members were present:

S. No.	Name	Designation
1.	Prof. Pradeep Bhatnagar Dean, Faculty of Science The IIS University, Jaipur	Chairperson
2.	Prof. Rajeev Gupta Professor, Department of Chemistry University of Delhi North Campus, Mall Road, Delhi-110007	External Member (Academician)
3.	Prof. Sanjeev Arora Professor, Department of Chemistry Kurukshetra University Kurukshetra-136119	External Member (Academician)
4.	Prof. R.K. Bansal Emeritus Professor, Department of Chemistry The IIS University, Jaipur	Member
5.	Prof. Raakhi Gupta Registrar The IIS University, Jaipur	Member
6.	Dr. Manisha Patni Associate Professor, Department of Chemistry The IIS University, Jaipur	Member
7.	Dr. Pragya Sinha Associate Professor, Department of Chemistry The IIS University, Jaipur	Member
8.	Dr. Deepak Singh Rajawat Asstt. Professor, Department of Chemistry The IIS University, Jaipur	Member
9.	Dr. Pratibha Mittal Asstt. Professor, Department of Chemistry The IIS University, Jaipur	Member
10.	Dr. Ruchi Singh Asstt. Professor, Department of Chemistry The IIS University, Jaipur	Member
11.	Dr. Trapti Gupta Asstt. Professor, Department of Chemistry The IIS University, Jaipur	Member
12.	Dr. Lav Kumar Varma Asstt. Professor, Department of Chemistry	Member



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13.	Dr. Tanuja Kumari Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member
14.	Dr. Varsha Goyal Associate Professor Head, Dept. of Chemistry The IIS University, Jaipur	Convener

The following members could not attend the meeting:

S. No.	Name	Designation
1.	Mr. Kunal Prasad Director-Marketing KCPL House, Basement Plot No.562, Sector -16A, Faridabad -121002	Industry Expert
2.	Ms. Swati Gupta 75, Second Floor Nagina bagh Ajmer -305001	Alumnae

At the outset, the Dean, Prof. Pradeep Bhatnagar welcomed all the members of the BOS.

Thereafter, agenda items were taken up and after considerable deliberations, the following decisions were taken:

1. The Minutes of the last meeting held on 24.03.2017 were considered and approved.
2. The syllabus of U.G Pass course and Honours Programme in Chemistry {Semester I to VI (2018-19 to 2020-21) } were considered and approved for academic Session 2018-19 with some changes in the following paper codes as suggested by the members-

At UG level

A. Theory Papers: (B.Sc. Pass/Hons.)

Minor changes:

S.No.	Paper Code	Proposed changes in the present syllabus	
		Addition	Deletion
1.	CHY- 101	Unit I : Size effects Unit III: CO ⁺ , CN ⁻	-
2.	CHY- 301	Unit III: Methods of preparation of octahedral complexes of Fe, Co, and Ni, (with monodentate ligands only), structure and bonding, Limitations of VBT	-
3.	CHY- 403	Unit I: Distillation of solutions, lever rule, applications of nernst law,	Unit III: Introduction to catalytic reaction.

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		<p>principle of steam distillation</p> <p>Unit II: Thermodynamic derivation using chemical potential to derive relation between the four colligative properties</p> <p>Unit IV: Type of catalyst, specificity and selectivity, enzyme catalysts</p> <p>Michaelis-Menten mechanism</p>	
4.	CHY- 501		Unit I: Limitations of VBT
5.	CHY- 503	<p>Unit I: Black-body of solids.</p> <p>Prerequisites is added in the main content of Unit I</p>	<p>Unit IV: Magnetic properties- paramagnetism, diamagnetism and ferromagnetism</p>
6.	CHY- 111	<p>Unit III: ionic compounds of the type AX (ZnS, NaCl, CsCl) and AX₂ (CaF₂-fluorite)</p>	-
7.	CHY-114	<p>Unit I: standard forms of straight lines and parabolic equations with graphs</p> <p>Unit II: partial differentiation of first and second order</p> <p>Unit V: Binomial (gas kinetic theory)</p>	<p>Unit I: Units of a measurement, interconversion of units, equation of a straight line in different forms and their graphs</p> <p>Unit II: partial differential coefficient, second order partial derivatives, total differentiation coefficient</p> <p>Unit V: (gas kinetic theory) and mean values</p>
8.	CHY- 311	Unit III- Limitations of VBT	-
9.	CHY- 611	Unit II: Shell model and Liquid drop model (Nuclear models were made more specific)	-
10.	CHY-612	<p>Unit I: Basic Elements of Spectroscopy and UV Spectroscopy (change in title)</p> <p>Different regions of EMI.....</p> <p>absorption and emission spectroscopy (added in unit I)</p> <p>Unit III: ¹H NMR Spectroscopy.</p> <p>Unit IV: Elementary idea of ²D NMR spectroscopy: COSY, NOESY</p>	-

All the above changes were considered and approved.



Major change

- A new paper "Biology for chemists" as CHY- 214(b) was proposed to be included in B.Sc. (H) sem II in the last meeting. The syllabi of the paper was perused by the members and approved for inclusion in the syllabi for students with mathematics background.
- In UG Hons. VIth semester, a paper titled **Research Methodology** (Chy 614) was proposed to be shifted to Vth semester as Chy 514 (so that students can have better understanding towards the application of research methodology in seminar presentation, a paper as Chy 516) and the paper titled **Environmental Chemistry** as Chy 514 (Vth semester) was suggested to be shifted to VIth semester as Chy 614 with a new title **Environmental and Green Chemistry**.
- Both the papers are restructured and unit wise distribution is as follows:

S.No.	Suggested Paper Code	Suggested New Paper Title	Unit Wise Distribution
1.	CHY 514	Research Methodology	Unit I – Literature Survey Unit II- Scientific Writing Unit III- Software application in Chemistry Unit IV- Intellectual property rights –I Unit V- Intellectual property rights –II
2.	CHY 614	Environmental and Green Chemistry	Unit I- General Aspects of Environmental Chemistry Unit II- Enhanced Atmospheric Effects Unit III- Environmental Toxicology Unit IV- Principles of Green Chemistry–I Unit V- Principles of Green Chemistry-II

- Dr. Sanjeev Arora suggested that the paper "Mathematics for Chemists" (CHY-114), should be taught by the faculty of chemistry department.

B. Practical papers: (B.Sc. Pass/Hons.)

- As per the suggestion given in the last BOS, '**Safety Measures**' were proposed to be included at UG (pass and Hons.) in semester I.
- Some new practicals were suggested to be added at different semesters of UG Pass and Hons. The following changes were proposed and approved:

S.No.	Paper Code	Proposed changes in the present syllabus	
		Addition	Deletion
1.	CHY 104	Laboratory Safety measures	



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2.	CHY 204	<ul style="list-style-type: none"> Temporary and permanent hardness. (added in complexometric titration) Determination of specific and equivalent conductance of the given electrolyte (NaCl) at different dilution, also infer the result. 	
3.	CHY 304	Preparation of Chloropentammine cobalt (III) chloride	
4.	CHY 404	Second Order Kinetics- Initial concentration of both the reactants are the same (Saponification of ethyl acetate is made more specific).	
5.	CHY-604	<ul style="list-style-type: none"> Benzil –Benzilic rearrangement, Aldol condensation Synthesis may be done by : Green/Conventional Method 	Halogen Addition: (Trans stilbene) & (4+2) cycloaddition Reaction
6.	CHY-115	Safety Measures	
7.	CHY-116	<p>Two new physical exercise is added as:</p> <ul style="list-style-type: none"> To determine the viscosity and kinematic viscosity of given oil (Mustard oil) by Redwood viscometer No.1. To determine the relative viscosity of given liquid by Ostwald viscometer. 	
8.	CHY-215	<p>One new volumetric exercise is added:</p> <p>a) Determination of the strength of FAS by titrating with $K_2Cr_2O_7$ using external indicator (potassium ferricyanide)</p>	
9.	CHY-315	<p>Minor experiments</p> <ul style="list-style-type: none"> To determine the heat of solution of KNO_3 at a specified water-salt mole ratio. To determine pH of different buffer solutions and evaluate pKa of acid by using Henderson equation. <p>Major experiments</p> <ul style="list-style-type: none"> To construct the phase diagram of two components (diphenyl amine and benzophenone) system by cooling curve method. 	
10.	CHY-415	<p>Minor Experiment</p> <ul style="list-style-type: none"> Determination of specific and equivalent conductance of the given electrolyte (NaCl) at different dilutions. <p>Major Experiment</p> <ul style="list-style-type: none"> Determine the composition of mixture of HCl and Acetic acid conductometrically 	



		using NaOH.	
11.	CHY-515	<ul style="list-style-type: none"> Synthesis may be done by : Green/Conventional Method Four new preparation have been added as: <ul style="list-style-type: none"> ➤ Methyl orange/ Methyl red ➤ Bromination of phenol ➤ Phenytoin from Benzil and urea ➤ Pthalic anhydride – pthalimide – anthranilic acid ➤ Benzil – Benzilic rearrangement (Atom economy) 	Halogen Addition: (Trans stilbene) & (4+2) cycloaddition Reaction Solvent free reaction

- The change in the marking scheme of the Continuous Assessment Examination and Semester End Examination of CHY 104 and CHY 115 was also suggested (due to the inclusion of safety measures) and approved.

The change in scheme as follows:

Scheme of Evaluation: Continuous Assessment (CA) (Practical): CHY 104, CHY 115				
Test	Safety measures (Quiz)	Viva	Attendance	Total
10	10	5	5	30

Scheme of Evaluation: Semester End Practical exam: (Practical): CHY 104	
Exercise	Marks
Inorganic Chemistry (Qualitative Mixture Analysis)	42
Physical Chemistry Experiment	16
Viva	7
Record	5
Total	70

Scheme of Evaluation: Semester End Practical exam: (Practical): CHY 115	
Exercise	Marks
Inorganic Chemistry (Qualitative Mixture Analysis)	55
Viva	10
Record	5
Total	70

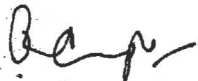
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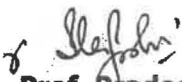
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At PG level

- External members strongly recommended major changes in the Post Graduate curricula (M.Sc. Chemistry) for the forthcoming session 2018-19. In view of this it is proposed to organize a Curriculum Development Workshop to revise the curricula majorly.
3. The BOS Co-opted Dr. Pragya Sinha as member of the Examiners Selection Committee for a period of one year (i.e. for the session 2018-19)
 4. The Examiners Reports for the Semester II, IV and VI Examination, April 2017 and Semester I, III and V Examination, November 2017 were reviewed.
 5. Blue print of question paper for B.Sc, B.Sc. (H) & M. Sc. Courses were considered and approved.
 6. The Question Papers of Semester -II, IV and VI Examination, April 2017 and Semester I, III and V Examination, November 2017 were reviewed and approved.

The meeting ended with a vote of thanks.


Dr. Raakhi Gupta
Registrar


Prof. Pradeep Bhatnagar
Dean, Faculty of Science


Dr. Varsha Goyal
Convener








4 Curriculum Development Workshop was held on 28-29 April 2018 and all the changes proposed by our esteemed members were incorporated in the syllabus of the year 2018-19

Bhatnagar
Dean of Science 17/6/2020

Dr. Pragya Singh
hunge.
 17/6/2020

Rector and Registrar
Acad

Vice-Chancellor

Per Vice Chancellor
 [Signature] 29/6



The IIS University, Jaipur

Department of Chemistry

Minutes of the curriculum development workshop in chemistry held on 28-29 April, 2018 at the ICG campus, Jaipur

The following members were present:

S. No.	Member	Designation
1.	Prof. Pradeep Bhatnagar Dean, Faculty of Science The IIS University, Jaipur	Chairperson
2.	Prof. J. M. Khurana University of Delhi North Campus, Mall Road, Delhi-110007	Member
3.	Prof. Rajeev Gupta Professor Department of Chemistry University of Delhi North Campus, Mall Road, Delhi-110007	Member
4.	Prof. S. K. Dogra Retd. Professor, Department of Chemistry IIT, Kanpur	Member
5.	Prof. S. D. Samant Dept. of Chemistry ICT, Mumbai	Member
6.	Dr. Tanmoy Chakraborty Dept. of Chemistry Manipal University, Jaipur	Member
7.	Dr. Raghu Chitta Dept. of Chemistry Central University of Rajasthan, Kishangarh	Member
8.	Prof. R. K. Bansal Emeritus Professor, Dept. of Chemistry The IIS University, Jaipur	Member
9.	Prof. Raakhi Gupta Registrar The IIS University, Jaipur	Member
10.	Dr. Manisha Patni Associate Professor Dept. of Chemistry The IIS University, Jaipur	Member
11.	Dr. Pragya Sinha Associate Professor Dept. of Chemistry The IIS University, Jaipur	Member
12.	Dr. Deepak Singh Rajawat Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member



13.	Dr. Pratibha Mittal Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member
14.	Dr. Ruchi Singh Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member
15.	Dr. Trapti Gupta Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member
16.	Dr. Lav Kumar Varma Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member
17.	Dr. Tanuja Kumari Asstt. Professor Dept. of Chemistry The IIS University, Jaipur	Member
18.	Dr. Priyanka Jain Assistant Professor Dept. of Chemistry The IIS University, Jaipur	Member
19.	Dr. Varsha Goyal Associate Professor Head, Dept. of Chemistry The IIS University, Jaipur	Member Secretary

At the outset, the Dean, Prof. Pradeep Bhatnagar welcomed all the members of the workshop. Further, Head of the Department, Dr. Varsha Goyal informed the members about the purpose and agenda of the workshop. **(Annexure I)**

Over two days, a number of deliberations took place. The following are the highlights of the discussion:

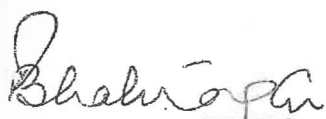
- The total credits in each semester should be equal.
- In semesters I-III, there should be four major theory papers (four credits each), one supportive paper (two credits each) and two practical papers (three credits each).
- The paper titles should be kept on the basis of the content of the papers. **(Annexure II)**
- In semester IV a new core paper should be introduced as "Synthetic Strategies in Organic Chemistry" in place of "Green Chemistry".
- Some new elective papers should be introduced in fourth semester like Polymers and Material Chemistry, Supramolecular and Photoinorganic chemistry, Natural products and Medicinal chemistry, Solid state and Nanotechnology.
- "Laboratory Safety Measures" should be incorporated in semester I as a compulsory component an internal examination (CA exam) should be conducted.



- A new marking scheme for internal (CA exam) was proposed for the papers:
 - Laboratory Course I and II (CHY 126 and 127)
 - Computer in Chemistry (CHY 225)
 - Research Methodology and Seminar (CHY 228).

(Annexure III)

After due discussion it was decided that the revised syllabi, with the suggestions duly incorporated, would be circulated to all the members for approval.



Prof. Pradeep Bhatnagar
Dean, Faculty of Science

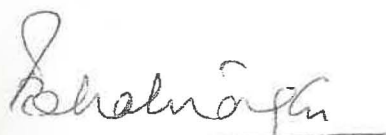


Dr. Varsha Goyal
Head, Dept. of Chemistry

The revised syllabus was circulated to all the members of the committee vide email on 5 June 2018. The suggestions as received from the members have been incorporated and the final syllabi **(Annexure IV)** is being submitted for approval.



Head, Dept. of Chemistry



Dean, Faculty of Science



The Vice Chancellor