



## DEPARTMENT OF CHEMISTRY

**1<sup>st</sup> Board of Studies(BOS)**  
**Date: 12<sup>th</sup> of January 2017**  
**Venue: Conference Hall**

### **Members:**

- Prof. M. A. Qureshi
- Prof. M Afzal Ansari
- Prof. Imran Ali
- Prof. Manzoor A Malik
- Prof. G M Peerzada
- Prof. Fouzia S. Qazi
- Dr. Aabid Hussain Shalla
- Dr. Peer Bilal
- Mr Farooq Hussain Bhat



**DEPARTMENT OF PHYSICS**  
Islamic University Of Science and Technology, Awantipora

Dean School of Science,  
IUST, Awantipora.

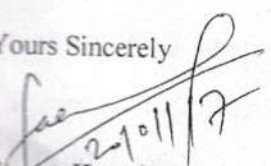
**Sub: Minutes of Board of Studies Meeting in School of Science**

Sir,

Kindly find attached here with the minutes of Board of Studies (BOS) Meeting in School of Science, held on 12<sup>th</sup> of January 2017.

Thank you

Yours Sincerely

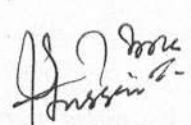

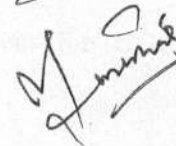

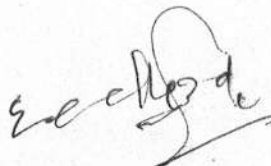
  
Farooq Hussain Bhat  
Secretary BOS

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20.1.17

Copy to:

- Dean Academic Affairs
- Registrar
- Head Department of Physics/Chemistry/Mathematics
- DR Academics
- Secretary to HVC for the information of HVC

No: IUST/DoP/BOS-MinMeetings/17/ 29  
Dated: January 20<sup>th</sup> 2017

Receipt No. 141 Dated: 20/01/2017  
Department of Chemistry

Minutes of Board of Studies in School of Sciences

Dated 12.01.2017

A meeting of Board of Studies (BoS) in School of Sciences was held on January, 12, 2017 in the Chancellor's conference room, at IUST.

Following members attended the meeting:

1. Prof. M A Qureshi (Chairman)
2. Prof. M Afzal Ansari (Subject Expert/Member)
3. Prof. Imran Ali (Subject Expert/Member)
4. Prof. Manzoor A Malik (Subject Expert/Member)
5. Prof. G M Peerzada (Subject Expert/Member)
6. Prof. Fouzia S. Qazi (Member)
7. Dr. Aabid Hussain Shalla (Member)
8. Dr. Peer Bilal (Member)
9. Mr. Farooq Hussain Bhat (Member Secretary)

In addition to above the following faculty members also participated in the discussions

1. Dr. Parvez Ahmad Khan
2. Dr. Hashim Rasool
3. Dr. Bilal Ahmad
4. Dr. Masood Ayoub
5. Dr. Zahid Yaseen
6. Dr. Shabir

Dr. Anshu Jain and Prof. Amber Habib could not attend the meeting due to their preoccupations.

Agenda of the Meeting:

To review the eligibility, course scheme and draft syllabi of the courses in the subjects of Physics, Chemistry and Mathematics.

Resolution:

The course structure with the following nomenclature was approved as per the UGC guidelines:

- | S. No. | Nature of Courses              |
|--------|--------------------------------|
| 1      | Core Courses (CC)              |
| 2      | Discipline Centric Course (DC) |
| 3      | Generic Elective Course (GE)   |
| 4      | Open Elective Course (OE)      |

2. The draft syllabi in the various courses as per the aforesaid nomenclature were thoroughly discussed and necessary corrections, reorientation and up gradation has been made and all the courses, course frame work and its revised contents have been unanimously approved by the board.
3. The board approved the syllabi of two elective courses for the UG and PG programs of the department of Mathematical Sciences of IUST which were already recommended by the subject experts of the BOS via email and the board endorsed their recommendations.
4. The Board confirmed the action taken by the Department of Chemistry and Department of Physics in terms of the eligibility of the candidates for M.Sc programme in the respective Departments as follows:

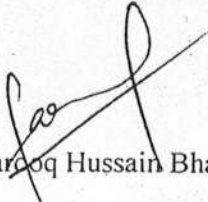
For MSc Physics:


BSc with Physics as one of the core subjects at the undergraduate level or B.E/B.Tech Electrical Engg / Electronics and Communication

For MSc Chemistry:

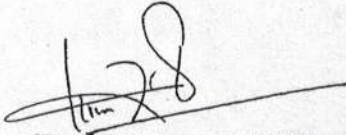
BSc with Chemistry as a core subject at the undergraduate level.

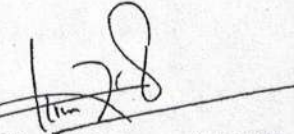
The Board however, advised that in case of inclusion of any other degree eligible for the MSc programme, the matter be referred to equivalence committee which may be constituted for the purpose.


  
Mr. Farooq Hussain Bhat

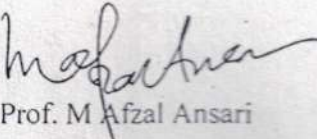
  
Dr. Aabid Hussain Shalla


Dr. Peer Bilal

  
Prof. Fozia S. Qazi

  
Prof. Manzoor A Malik

  
Prof. G M Peerzada

  
Prof. M Afzal Ansari

  
Prof. Imran Ali

  
Prof. M A Qureshi



## DEPARTMENT OF CHEMISTRY

**2<sup>nd</sup> Board of Studies(BOS)**  
**Date: 18<sup>th</sup> of September 2017**  
**Venue: Conference Hall**

### **Members:**

- Prof. M. A. Qureshi
- Prof. Mohammad Shakir
- Prof. M Afzal Ansari
- Prof. Manzoor A. Malik
- Prof. G. M. Rather
- Prof. Fouzia S. Qazi
- Dr. Aabid Hussain Shalla
- Dr. Peer Bilal
- Mr Farooq Hussain Bhat



# ISLAMIC UNIVERSITY OF SCIENCE & TECHNOLOGY

## Minutes of Board of Studies

A meeting of board of studies (BOS) of School of Science, IUST, Awantipora, was held on 18<sup>th</sup> of September 2017. Following external/internal members were present who critically reviewed proposed course content of 3<sup>rd</sup> and 4<sup>th</sup> semester besides some minor changes in the overall course content to make it academically rich and promote chances of employability of prospective pass outs to face contemporary challenges in the subject.

1. Prof. M. A. Qureshi (Chairman)
2. Prof. Mohammad Shakir (Subject Expert/Member)
3. Prof. M. Afzal Ansari (Subject Expert/Member)
4. Prof. Manzoor A. Malik (Subject Expert/Member)
5. Prof. G. M. Rather (Subject Expert/Member)
6. Prof. Fouzia S. Qazi (Member)
7. Dr. Aabid Hussain Shalla (Subject Expert/Member)
8. Dr. Peer Bilal (Member)
9. Mr. Farooq Hussain Bhat (Member Secretary)

**In addition to above the following faculty members also participated in the discussions**

1. Dr. Nisar Ahmad Malik
2. Dr. Sheikh Abdul Majid
3. Dr. Manzoor Ahmad Rather
4. Dr. Muzzaffar Ahmad Bhat
5. Dr. Parvez Ahmad Khan
6. Dr. Hashim Rasool

Following suggestions were proposed by experts of BOS for Department of Chemistry and endorsed for drafting of syllabus of Master's Programme in Chemistry (Semester-I, Semester-II, Semester-III, and Semester-IV):

1. New Credit weightage was proposed by the board to the following course

Course Code	Credit
Project and Dissertation	4

2. Few of the course titles in both semesters, were suggested and renamed which include:

Core Course PCH-CC-103 to be renamed as Chemical Kinetics and Quantum Chemistry.

Core Course PCH-CC-203 to be renamed as Quantum Chemistry and Electrochemistry.

Core Course PCH-CC-302 to be renamed as Pericyclic Reactions and Organo-photochemistry.

Core Course PCH-CC-303 to be renamed as Thermodynamics and Solid-State Chemistry.

Discipline Centric Course PCH-DCE-307 to be renamed as Chem-informatics.

Core Course PCH-CC-402 to be renamed as Statistical Thermodynamics and Colloidal Chemistry

3. Reorganisation of units in Course PCH-CC-102 was proposed and approved as per following sequence:

Unit II to be placed as Unit IV,

Unit III to be placed as Unit II.

Unit IV to be placed as Unit III,

4. In Course PCH-CC-103 experts suggested following changes with the approval of board:

❖ Reorganisation and shifting of Units between PCH-CC-103 and PCH-CC-203 as;

Unit I to be exchanged as Unit III of PCH-CC-203

Unit II to be exchanged as Unit IV of PCH-CC-203

5. In Course PCH-CC-202 experts suggested the following with the approval of board:

❖ Insertion of "Review and Recapulation" as sub-heading in Unit-I.

6. With respect to Course Code PCH-CC-203, Prof G. M. Rather suggested heading corrections of units with the approval of board:

❖ Unit I to be written as "Quantum Chemistry-III"

❖ Unit II to be written as "Quantum Chemistry-IV"

The other changes in this course include:

❖ Prof G M Rather and Prof. Mohammad Shakir suggested the following changes in this course.

Shifting of "Huckel's Pi-MO theory, Application to linear and cyclic polyenes, Pi-electron charge and bond-order" from Unit-I to Unit-II.

- ❖ Deletion of only “Hartee” from Unit-II and retention of “Hartree-Fock self-consistent field method in the light of system one and two electron integrals”
  - ❖ Retention of only few theories in unimolecular reactions.
7. In Course PCH-DCE-205, following changes were suggested by Prof ...Mohammad Shakir and Prof. G. M. Rather with the approval of board:
- ❖ Addition of “(Cytochromes C, Cytochrome C-oxidase, Cytochrome P-450)” in Unit-II.
  - ❖ Addition of “Dioxygen transport (haemocyanin and hemoerythrin)”
  - ❖ Deletion of term “antibiotics” from the Unit-IV.
8. In Course PCH-DCC-206, Prof. Mohammad Shakir and Prof G. M. Rather suggested following changes with approval of board::
- ❖ Restructuring of Unit II and Unit II as:
    - Deletion of “Chemical and electrochemical synthesis” from Unit-II
    - Insertion of inorganic polymer examples in Unit-II and insertion of metallic polymer examples in Unit-III.
9. In Course code PCH-CC-208, Prof. Mohammad Shakir and Prof. G. M. Rather suggested few changes with the approval of board:
- ❖ Replacement of tribasic with dibasic in pH-metry technique.
  - ❖ Insertion of some typographical corrections in other techniques.
10. In course code PCH-OE-201, Prof. Mohammad Shakir and Prof. G. M. Rather suggested following changes with the approval of board:
- ❖ Deletion of Nanolithography from Unit-II.
  - ❖ Insertion of term “method” after sol-gel in Unit-II.
11. In course PCH-CC-301, Prof. Mohammad Shakir and Prof. G. M. Rather suggested the following corrections with the approval of board:
- ❖ Deletion of “Metal hydride complexes” from Unit-I.
  - ❖ Deletion of “Synthetic reactions involving organometallics” from Unit-IV
  - ❖ Insertion of book entitled “Chemistry of elements, N.N. Green Wood, Elsevier” into books recommended list.
12. In Course PCH-CC-302, Prof. Mohammad Shakir and Prof. G. M. Rather suggested the following changes with endorsement by board:



❖ Rename of Units I and II as:

- Pericyclic reactions-I and Pericyclic reactions-II

❖ Deletion of " Introduction, Interaction of electromagnetic radiation with matter, absorption of light" from Unit-III.

❖ Removal of Bulleted sub-headlines from Unit-IV.

13. In Course PCH-CC-303, Prof G. M. Rather suggested, accepted and prepared the full syllabus for this course after endorsement by the board.

14. In course PCH-CC-304, Prof G. M. Rather and Prof. Mohammad Shakir suggested following changes duly approved by the board:

❖ Insertion of term "properties" after ".....magnetic" in Unit-III.

❖ Deletion of term " works" in Unit-IV

15. In Course PCH-DCE-305 Prof. Mohammad Shakir and Prof. G. M. Rather suggested the following corrections:

❖ Deletion of "Various types of electronic transitions, Beer-Lambert Law" from Unit-I.

❖ Merging of Ultraviolet and Infrared spectroscopy as a single Unit that is Unit-I

❖ Carbon-13 NMR Spectroscopy to be titled as Unit-IV.

16. In Course PCH-DCE-306 Prof. Mohammad Shakir and Prof. G. M. Rather suggested the following corrections with the consent of board members:

❖ Shifting of "NMR study of steric-chemically non-rigid species,  $\text{Fe}(\text{CO})_5$ ,  $\text{PF}_5$ ,  $\text{BrPF}_5$ , Berry pseudo-rotation" from Unit-I to PCH-CC-301.

❖ Addition of "Recognition of nature of M-L bond, Coordination compound, Structure and oxidation state." To Unit-II.

❖ Insertion of quadrupole splitting after isomer shift to Unit-II.

❖ Addition of ".....complexes and biomolecules." To Unit-III.

17. In Course PCH-DCE-307, Prof G. M. Rather and Prof. Mohammad Shakir suggested the framing of new syllabus with new course title "Chem-informatics"

18. In Course PCH-CC-308, Prof. G. M. Rather and Prof. Mohammad Shakir suggested the following changes:

❖ Lab Practicals to be arranged according to the technique or instrument involved.

❖ Demarcations or bold sub-headings to be removed.

19. In Course PCH-CC-402, Prof. G. M. Rather and Prof. Mohammad Shakir suggested the following changes:

❖ Course title to be renamed as, “ Statistical Thermodynamics and Colloidal Chemistry”

❖ Restructuring of Unit-I and Unit-II.

❖ Prof. G. M. Rather gave the consent and prepared the syllabus for this course.

20. In Course PCH-CC-403, Prof. Mohammad Shakir and Prof. G. M. Rather suggested the formatting of Units with headings properly.

21. In Course PCH-DCE-306 Prof. Mohammad Shakir and Prof. G. M. Rather suggested the following corrections with the consent of board members:

❖ Replacement of Unit-III with analytical techniques Unit.

22. In Course PCH-OE-401 Prof. Mohammad Shakir and Prof. G. M. Rather suggested the following corrections with the consent of board members:

❖ Insertion of term “products” after personal care in Unit-I.

**Note:**

All the above mentioned desirable changes including insertion, deletion and reorientation have approval of board in all the courses of both the semesters (I, II, III, and IV) for Masters Programme in Chemistry at IUST with effect from academic session 2017 onwards.

**Experts:**

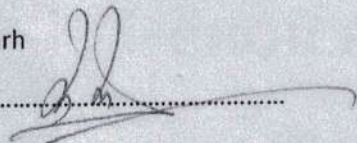
**1. Prof. Mohammad Shakir**

Department of Chemistry,

Aligarh Muslim University.

Aligarh

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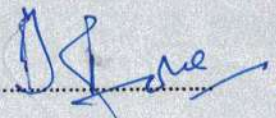
**2. Prof. G. M. Rather**

Department of Chemistry,

University of Kashmir, Hazratbal,

Srinagar.

Sign.....



**Coordinator**

Dr. Aabid Hussain Shalla

Department of Chemistry

Islamic University of Science and Technology

Awantipora, Pulwama

Sign.....



10/10/2017

**HOD**

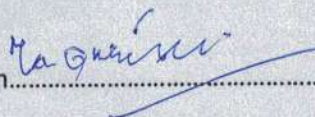
Prof. M. A. Quirishi

Department of Chemistry

Islamic University of Science and Technology

Awantipora, Pulwama

Sign.....



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## DEPARTMENT OF CHEMISTRY

### **3rd BOARD OF STUDIES (BOS)**

**Date: 10<sup>th</sup> of August 2018**

**Venue: Conference Hall**

#### **Members:**

- Prof. G.M. Rather
- Prof. Imran Ali
- Prof. Mohammad Akbar Khuroo
- Dr. Aabid Hussain Shalla
- Dr. Manzoor Ahmad Dar
- Mr. Sheikh Asif



# ISLAMIC UNIVERSITY OF SCIENCE AND TECHNOLOGY

## AWANTIPORA, KASHMIR J&K

### Minutes of Board of Studies (BOS)

A meeting of board of studies (BOS) of Department of Chemistry, IUST, Awantipora, was held on 10<sup>th</sup> of August 2018. Following external/internal members were present who critically reviewed the proposed course content (prepared as per the recent Choice Based Credit System Scheme) of different semesters of the Masters and PhD programmes offered by the Department. The members proposed some useful suggestions and changes in the overall course content to make it enriching from an academic point of view and promote research/employment skills among the students to face contemporary challenges in the subject.

#### The following members attended the meeting:

1. Prof. G.M. Rather (Chairman)
2. Prof. Imran Ali (Subject Expert/Member)
3. Prof. Mohammad Akbar Khuroo (Subject Expert/Member)
4. Dr. Aabid Hussain Shalla (Member)
5. Dr. Manzoor Ahmad Dar (Member)
6. Mr. Sheikh Asif (Member)

#### In addition to above to following staff members also participated in the discussions

1. Dr. Sheikh Abdul Majid
2. Dr. Manzoor Ahmad Rather
3. Dr. Nisar Ahmad Malik

Following suggestions were proposed by the experts of the BOS, Department of Chemistry and endorsed for drafting of syllabus of Masters Programme in Chemistry.

1. The course codes were modified as per the new Choice Based Credit System Scheme (Order No.91 (Est.) of 2018 Dated: 01/06/2018).
2. Reorganization of the units in Course CHM502C was proposed and approved as per following sequence:

Unit IV to be placed as Unit II

3. A new subsection "Reaction Mechanism and its determination" was proposed and incorporated in Unit II of CHM502C course.
4. Elaboration of the contents in the Unit IV of CHM504C course were proposed and approved subsequently.
5. Inclusion of "construction of character tables for  $C_{4v}$ ,  $D_{3h}$ ,  $D_{3d}$  and  $T_d$  systems" was proposed and approved by the BOS.
6. "Competition between substitution and elimination reactions" was suggested and introduced in the Unit II of CHM552C course.
7. Title of Unit II of CHM601C was modified from " $\pi$ -bonded Organometallic Compounds" to " $\pi$ -bonded Organometallic Compounds"
8. "Photochemistry of vision" was moved from Unit IV to Unit III of CHM602 as per the recommendation of experts.
9. Title of CHM603C was changed from "Electrochemistry, Solid State and Micelles" to "Electrochemistry and Solid State Chemistry". Moreover the Unit IV titled "Micelles, Solubilization and Micellar Catalysis" was replaced by "Electrochemistry-II". The various units were reorganized as below:

Unit I: Electrochemistry-I

Unit II: Electrochemistry-II

Unit III: Solid State Chemistry-I

Unit IV: Solid State Chemistry-II

10. In course CHM604C, the experts suggested to change the title from "Chemical, Electroanalytical and Thermal Methods of Analysis" to "Chemical, Thermal and Electroanalytical Methods of Analysis". Further, Unit III was placed at Unit IV and vice versa.

11. In CHM606E, on the basis of expert suggestion the word "Introduction" was removed from the contents of Unit I. Moreover, the title of Unit III of the same course was modified from "Nuclear magnetic resonance spectroscopy" to "Proton Nuclear magnetic resonance spectroscopy ( $^1\text{H-NMR}$ )" following the suggestion of experts.
12. Modification of the title of course CHM609E from "Chem-informatics" to "Chemoinformatics" was suggested during the BOS and accommodated accordingly.
13. Restructuring of the various courses in the fourth semester were suggested and approved by the BOS members. A new course was introduced in Inorganic Chemistry in the fourth semester and new course titles were proposed for the various fourth semester courses which were approved by the BOS.
14. On the recommendations of expert committee, the content of Unit I of course CHM001 was reorganized and new topic on "Vitamins: Classification and functions" was also introduced.
15. The title of open elective course CHM002 was modified from "Introduction to Nanotechnology" to "Nanoscience and Polymers".
16. A new course titled "Chemistry in Every Day Life" was introduced to highlight the role of Chemistry in everyday life.
17. A new open elective course titled "Life and Contributions of Some Famous Scientists" was introduced to motivate students towards Science and Technology.

**Dr. Manzoor Ahmad Dar (Member)**  
Assistant Professor Chemistry

**Mr. Sheikh Asif Rashid**  
D.R. Academics

**Dr. Aabid Hussain Shalla (Member)**  
I/C Head Chemistry

**Prof. Imran Ali**  
(External Member)

**Prof. M. Akbar Khuroo**  
(External Member)

**Prof. G. M. Rather (Chairman)**  
Dean School of Sciences

No. IUST/CHM/BOSminutes/18/3.10

Dated: 10/08/2018



DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF SUIBI  
KABUL