

**MINUTES OF THE Board of Studies meeting on  
Mathematical sciences, HELD  
IN NISER, Bhubaneswar**

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Date: April 7, 2018 AT 9.00 a.m.

**Members Present**

1. Prof. B. Ramakrishnan, (Chairperson)
2. Prof. J.K. Verma, I.I.T Bombay
3. Prof. K.N. Raghavan, I.M.Sc
4. Prof. Meena Mahajan, I.M.Sc.
5. Prof. Mahuya Datta, I.S.I. Kolkatta
6. Prof. D. Surya Ramana, HRI, Allahabad.
7. Prof. Varadharajan Muruganandam, NISER
8. Dr. Sanjay Parui (Invitee)
9. Dr. Subhankar Mishra (Invitee)

**Members who could not attend:**

1. Prof. B. Sury.
2. Prof. K.V. Subrahmanyam.
3. Prof. R.R. Puri.

**Agenda**

1. To deliberate and approve the course work along with credit-distribution for Ph.D in Mathematical Sciences at NISER.
2. To deliberate and approve the course work along with credit-distribution for Ph.D in Computer Science, at NISER.

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एच.बी.एन.आई / H.B.N.I.
आवक सं / Inward No.: 1005
दिनांक / Date: 18/4/18
हस्ताक्षर / Initial:

**Item 1:** Assignment of credits for Ph.D courses.

Decision Taken: it is decided to assign 8 credits for the core and elective courses, wher as, the course Research Methodology is given 4 credits.

**Item 2. Discussion on Courses in Mathematics II.**

(a) The committee deferred the discussion on Courses in Mathematics II stream, as there is no expert in statistics/probability in the Board.

(b) The committee further recommends that at least two experts in the field of Statistics may be invited to the next BoS meeting proposed exclusively to approve the syllabus for this stream.

The following list of the experts is suggested by the committee.

1. Prof. Rajeev Karandikar, CMI.
2. Prof. Abhay Bhatt, I.S.I. Delhi
3. Prof. Rahul Roy, I.S.I Delhi
4. Prof. Probal Chaudhuri, I.S.I. Kolkata,
5. Prof. Arup Bose, I.S.I. Kolkata.

**Item 3: The distribution of the courses Stream I.**

- Semester I. Total Credits = 28
  1. Algebra I (8)
  2. Analysis I (8)
  3. Topology I (8)
  4. Research Methodology (4)
- Semester II. Total Credits = 32
  1. Algebra II (8)
  2. Analysis II (8)
  3. Topology II (8)
  4. Complex Analysis (8)
  5. Elective (8)
- The student is expected to take at least 2 out of the first 3 core courses enumerated above for semester II.



- A course on *Differential Geometry* should be included in the list of elective courses. Similarly, some courses entitled "Topics in ...." can be introduced as electives.

**Item 4: Approval of the syllabus** The syllabus for Core and elective courses are hereby approved subject to the following conditions.

1. The course M659 Topology and Complex analysis has to be bifurcated into two separate courses viz, Topology I and Complex Analysis.
2. M632 Advanced Probability should be made elective and should be named Probability.

**Item 5:** Some corrections that are found in the preamble of the Course Curriculum submitted by SMS, NISER, were indicated to the Chairperson, SMS for the corrections.

**Item 6:** The chairpersons of respective schools are requested to re-submit the curriculum after effecting the modifications suggested.

**item 7:** Changes suggested in the Course Curriculum for PhD in Computer Science.

- Re-assign the course credits. CS/Math courses will be 8 credits each. Research methodology course will be 4 credits.

List 1: Core Courses

- Restructure the course lists. List 2: Research Methodology

List 3: Elective Courses

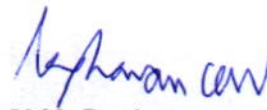
- Requirements: Each student will do three courses from List 1, and the course on Research Methodology, in semester 1. In the second semester, the student will do 4 courses from lists 1 and 3, including the seminar course.
- Courses numbering need to be rationalised.
- Minor changes in syllabus specification.

**Item 8** The BoS authorises the Convener to submit the final syllabus to HBNI, after scrutinising the changes mentioned above, through email exchange.

**Item 9: Any other item:**

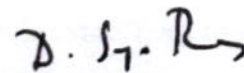
The committee is of the view that it is not under the purview of the Board to discuss the query raised by the Chairperson, SMS, NISER on the feasibility of having a separate Ph.D program in Statistics with the curriculum given in Mathematics II.

  
J.K. Verma,


  
K.N. Raghavan

  
Meena Mahajan

  
Mahuya Datta,

  
D. Surya Ramana

  
V Muruganandam

  
B. Ramakrishnan, (Chairperson)