



Indian Institute of Technology Indore

Minutes of the 38th meeting of the Senate held on 19 December 2023 (Tuesday) 3.00 p.m. at Maitreyi Seminar Hall, IIT Indore.

Following members attended the meeting:

Chairperson		
1	Prof. Suhas S. Joshi	Director, IIT Indore
Deans		
2	Prof. Vipul Singh	Dean, Academic Affairs
3	Prof. Sandeep Chaudhary (present online)	Dean, Administration
4	Prof. Avinash Sonawane	Dean, International Relation
5	Prof. I. A. Palani (present online)	Dean, Research and Development
6	Dr. Sanjeev Singh	Acting Dean, Student Affairs
Head of Departments		
7	Dr. Mayur Shirish Jain	Acting HoD, Civil Engineering
8	Dr. Ranveer Singh	HoD, Computer Science and Engineering
9	Prof. Vivek Kanhangad	HoD, Electrical Engineering
10	Prof. Shanmugam Dhinakaran (present online)	HoD, Mechanical Engineering
11	Dr. R. S. Maurya	Representative HoD, Metallurgical Engineering and Materials Science
12	Prof. Amit Kumar (present online)	HoD, Biosciences and Biomedical Engineering
13	Prof. Saurabh Das (present online)	Acting HoD, Astronomy, Astrophysics and Space Engineering
14	Prof. Niraj Kumar Shukla	HoD, Mathematics
15	Prof. Ruchi Sharma	HoD, Humanities and Social Sciences
Professors		
16	Prof. Abhinav Kranti (present online)	Electrical Engineering
17	Prof. Sandeep Chaudhary (present online)	Civil Engineering
18	Prof. Avinash Sonawane	Biosciences and Biomedical Engineering
19	Prof. Prabhat Kumar Upadhyay (present online)	Electrical Engineering
20	Prof. I. A. Palani (present online)	Mechanical Engineering
21	Prof. Dhinakaran Shanmugam (present online)	Mechanical Engineering
22	Prof. Amit Kumar (present online)	Biosciences and Biomedical Engineering

23	Prof. Prashant Kodgire (present online)	Biosciences and Biomedical Engineering
24	Prof. Pritee Sharma (present online)	Humanities and Social Sciences
25	Prof. Ruchi Sharma	Humanities and Social Sciences
26	Prof. Rajesh Kumar	Physics
27	Prof. Raghunath Sahoo	Physics
28	Prof. Vivek Kanhangad	Electrical Engineering
29	Prof. Ankhi Roy	Physics
30	Prof. Somaditya Sen	Physics
31	Prof. Chelvam Venkatesh (present online)	Chemistry
32	Prof. Kiran Bala (present online)	Biosciences and Biomedical Engineering
33	Prof. Anirban Sengupta (present online)	Computer Science and Engineering
34	Prof. Rupesh Shivaji Devan	Metallurgical Engineering and Materials Science
35	Prof. Antony Vijesh Villavarayan	Mathematics
36	Prof. Niraj Kumar Shukla	Mathematics
Other Authorities		
37	Dr. Jayaprakash Murugesan	Chief Warden
38	Dr. Anand Petare	Workshop Superintendent, Central Workshop
Special Invitees		
39	Dr. Santanu Manna	Mathematics
40	Dr. Bapan Ghosh	Mathematics
41	Dr. Mohd. Arshad	Mathematics
42	Mr. Rajesh Kumar	Assistant Librarian
43	Mr. Neeraj Kumar	Assistant Registrar, Academic Affairs
44	Mr. Tapeshe Parihar	Section Officer, Academic Office
Secretary		
45	Mr. S. P. Hota	Registrar, IIT Indore
Leave of absence		
46	Prof. Himanshu Rai	Director, IIM Indore
47	Dr. Shankar V. Nakhe	Director, RRCAT
48	Mr. B Anil Baliga	Ex Executive Vice President VE Commercial Vehicles Ltd.
49	Prof. Abhiram G. Ranade	Professor, Department of Computer Science and Engineering, IIT Bombay
50	Prof. Ajay Kumar Jain	Professor, Management Development Institute, Gurgaon
51	Prof. Manish Kumar Goyal	Dean of Infrastructure Development
52	Prof. Suman Mukhopadhyay	Dean, Alumni and Corporate Relations
53	Prof. Abhishek Srivastava	Dean, Faculty Affairs
54	Prof. Devendra L. Deshmukh	Dean, Educational Outreach
55	Prof. Tushar Kanti Mukherjee	HoD, Chemistry
56	Prof. Preeti A. Bhobe	HoD, Physics

57	Prof. Narendra S. Choudhary	Computer Science and Engineering
58	Prof. Neelesh Kumar Jain	Mechanical Engineering
59	Prof. Anand Parey	Mechanical Engineering
60	Prof. Ram Bilas Pachori	Electrical Engineering
61	Prof. Vimal Bhatia	Electrical Engineering
62	Prof. Rajneesh Misra	Chemistry
63	Prof. Suman Mukhopadhyay	Chemistry
64	Prof. Subhendu Rakshit	Physics
65	Prof. Krushna R. Mavani	Physics
66	Prof. Sarika Jalan	Physics
67	Prof. G. S. Murthy	Biosciences and Biomedical Engineering
68	Prof. Santosh Kumar Vishvakarma	Electrical Engineering
69	Prof. Shaibal Mukherjee	Electrical Engineering
70	Prof. Trapti Jain	Electrical Engineering
71	Prof. Mukesh Kumar	Electrical Engineering
72	Prof. Manish Kumar Goyal	Civil Engineering
73	Prof. Neelima Devarakonda Satyam	Civil Engineering
74	Prof. Bhupesh Kumar Lad	Mechanical Engineering
75	Prof. Santosh Kumar Sahu	Mechanical Engineering
76	Prof. Ritunesh Kumar	Mechanical Engineering
77	Prof. Aruna Tiwari	Computer Science and Engineering
78	Prof. Abhishek Srivastava	Computer Science and Engineering
79	Prof. Kapil Ahuja	Computer Science and Engineering
80	Prof. Abhirup Datta	Astronomy, Astrophysics and Space Engineering
81	Prof. Sk. Safique Ahmad	Mathematics
82	Prof. Apurba Kumar Das	Chemistry
83	Prof. Sampak Samanta	Chemistry
84	Prof. Sanjay Kumar Singh	Chemistry
85	Prof. Biswarup Pathak	Chemistry
86	Prof. Nirmala Menon	Humanities and Social Sciences
87	Prof. Preeti Anand Bhobe	Physics
88	Prof. Sudeshna Chattopadhyay	Physics
89	Prof. Parasharam M. Shirage	Metallurgical Engineering and Materials Science
90	Prof. Swadesh Kumar Sahoo	Mathematics
91	Prof. Amod C. Umarikar	Electrical Engineering
92	Prof. Srivathsan Vasudevan	Electrical Engineering
93	Prof. Devendra L. Deshmukh	Mechanical Engineering
94	Prof. Pankaj Ramesh Sagdeo	Physics
95	Prof. Mobin Shaikh	Chemistry
96	Prof. Tushar Kanti Mukherjee	Chemistry

97	Prof. Anjan Chakraborty	Chemistry
98	Prof. Satya Silendra Bulusu	Chemistry
99	Prof. Mirza Saqib Baig	Biosciences and Biomedical Engineering
100	Prof. Neminath Hubballi	Computer Science and Engineering
101	Prof. Santosh Sattappa Hosmani	Metallurgical Engineering and Materials Science
102	Prof. Satyajit Chatterjee	Mechanical Engineering
103	Prof. Kazi Sabiruddin	Mechanical Engineering
104	Prof. Pavan Kumar Kankar	Mechanical Engineering
105	Dr. Sharad Gupta	Convener, Health Center Advisor Committee
106	General Secretary, Student Gymkhana	Ex-officio
107	Academic Secretary, Student Gymkhana	Ex-officio

ITEM 38.1: Welcome and Opening remarks by the Chairman of the Senate.

The Chairman, Senate welcomed all the members and special invitees to the meeting.

He informed that this meeting is mainly for approval of syllabi of courses for B.Tech. 2nd, 3rd, and 4th year of 'Mathematics and Computing' w.r.t. the NEP guidelines.

He announced that the next two Senate meetings will be held on 10 January 2024 and 25th January 2024 to discuss the Syllabi of courses for B.Tech. 2nd, 3rd, and 4th year as per the revised UG Curriculum of other programs w.r.t. the NEP guidelines.

ITEM 38.2: Confirmation of the minutes of the 37th Meeting of Senate held on 12 December 2023.

The Senate confirmed the Minutes of its 37th Meeting of Senate held on 12 December 2023.

ITEM 38.3: Action Taken Report (ATR) on minutes of 37th Meeting of Senate held on 12 December 2023.

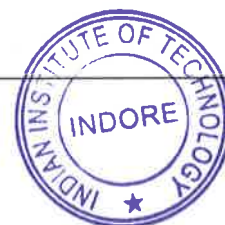
The Senate noted the actions taken on the decisions of the 37th Meeting of Senate held on 12 December 2023.

ITEM 38.4: Syllabi of courses for B.Tech. 2nd, 3rd, and 4th year of 'Mathematics and Computing' w.r.t. the NEP guidelines.

DUGC Mathematics presented the course structure and syllabus of courses for B.Tech. 2nd, 3rd, and 4th year of 'Mathematics and Computing' w.r.t. the NEP guidelines.

The Senate discussed and approved the following courses with remarks as given below:

Course Code	Course Name	Weekly Contact Hours L-T-P	Total Credits	Senate remarks
Semester 3				
ZZ xxx	Course-I for Minor Program	x-x-x	3	Approved
MA 205	Complex Analysis	3-1-0-2 (1/2 semester)	2	It was an existing course as MA-203: Complex Analysis and Differential Equations-II (3-1-0-4) now has been split into two half semester course MA 205: Complex Analysis and MA 207 : Differential Equations-II.
MA 207	Differential Equations-II	3-1-0-2 (1/2 semester)	2	
MA 209	Foundations of Mathematical Analysis	2-1-0	3	Approved
MA 215	Probability and Statistics	2-1-0	3	Approved
MA 211 / CS 201	Discrete Mathematical Structures [#]	2-1-0	3	Already approved course
MA 213 / CS 203	Data Structures and Algorithms [#]	2-1-0	3	Already approved course
MA 253 / CS 253	Data Structures and Algorithms Lab [#]	0-0-3	1.5	Already approved course
MA 2xx	Department Elective (DE-1)	x-x-x	3	-
	Total		20.5/23.5	
Semester 4				
ZZ xxx	Course-II for Minor Program	x-x-x	3	-
MA 204N	Numerical Methods	2-0-2	3	Approved
MA 202	Multivariate Calculus and Measure Theory	2-1-0	3	Approved



MA 206	Mathematical Logic and Theory of Computation	2-1-0	3	Approved
MA 208 /CS 204	Design and Analysis of Algorithms [#]	2-1-0	3	Already approved course
MA 254 /CS 254	Design and Analysis of Algorithms Lab [#]	0-0-3	1.5	Already approved course
MA 2xx	Department Elective (DE-2)	x-x-x	3	-
ZZ xxx	Institute Elective-1	x-x-x	3	-
	Total		19.5 /22.5	

Semester 5

ZZ xxx	Course III - Minor Program	x-x-x	3	-
MA 301	Matrix Computations	2-0-2	3	Approved
MA 305	Data Science	2-0-2	3	Approved with suggestion to remove the publishing place in the given list of suggested books.
MA 307 / CS 307	Optimization Algorithms and Techniques [#]	2-1-0	3	Already approved course
MA 303 / CS 303	Operating Systems [#]	2-1-0	3	Already approved course
MA 313 / CS 313	Computer Networks [#]	2-0-2	3	Already approved course
MA 357 / CS 357N	Optimization Algorithms and Techniques Lab [#]	0-0-2	1	Already approved course
MA 353 / CS 353N	Operating Systems Lab [#]	0-0-2	1	Already approved course
MA 3xx	Department Elective (DE-3)	x-x-x	3	-
ZZ xxx	Institute Elective-2	x-x-x	3	-
	Total		23/26	

Semester 6

ZZ xxx	Course IV - Minor Program	x-x-x	3	-
MA 302	Statistical Inference	2-0-2	3	Approved with suggestion to remove the reference book SI No- 5. "A first course in Probability and Statistics", if not essential.
MA 306	Monte-Carlo Simulation	2-0-2	3	Approved with suggestion to include as Institute Elective also.
MA 308	Techniques in Parallel Computing	1-0-2	2	Approved with suggestion to change the title as 'Parallel Computing Methods'.
MA 304 /CS 304N	Computational Intelligence [#]	2-1-0	3	Already approved course
MA 354 /CS 354N	Computational Intelligence Lab [#]	0-0-3	1.5	Already approved course
MA xxx	Department Elective (DE-4)	x-x-x	3	-
MA xxx	Department Elective (DE-5)	x-x-x	3	-
ZZ xxx	Institute Elective-3	x-x-x	3	-
	Total		21.5/24.5	

Semester 7

ZZ xxx	Course-V for Minor Program	x-x-x	2	-
MA 493	B Tech Project (BTP)	0-0-32	16	-
MA 495	Internship - I	x-x-x	1	-
MA 497	Internship - II	x-x-x	1	-
	Total		18/20	-

Semester 8

MA 4XX	Department Elective VI	x-x-x	3	-
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MA 4XX	Department Elective VII	x-x-x	3	-
ZZ xxx	Institute Elective IV	x-x-x	3	-
ZZ xxx	Institute Elective V	x-x-x	3	-
ZZ xxx	Institute Elective VI	x-x-x	3	-
	Total		15	-
<u>Elective Courses</u>				
MA 217	Linear Programming	2-1-0	3	Approved
MA 219	Introduction to Dynamical Systems	2-0-2	3	Approved
MA 210	Elementary Number Theory and Algebra	2-1-0	3	Approved
MA 212	Regression Analysis	2-1-0	3	Approved
MA 309	Numerical Methods for Partial Differential Equations	2-0-2	3	Approved
MA 311	Statistical Distribution Theory	2-1-0	3	Approved
MA 310	Algorithmic Techniques and Applications of Data Science	2-1-0	3	Approved with suggestion to add reference book.
MA 312	Financial Engineering	2-1-0	3	Deferred for next meeting with suggestion to revise the course syllabus by adding lab component and make L-T-P-C 2-0-2-3 instead of 2-1-0-3.
MA 314	Random Matrices	2-1-0	3	Approved with suggestion to revise the objective of the course which should be generic comment.
MA 452/ MA 652	Theory of Transforms	2-1-0	3	Already approved course
MA 407/ MA 607	Nonlinear Dynamics and Computations	2-0-2	3	Already approved course
MA 454/ MA 654	Mathematical Modeling and Simulations	2-0-2	3	Already approved course

MA 405/ MA 605	Differential Equations in Population Dynamics	2-0-2	3	Already approved course
MA 402	Industrial Statistics	2-0-2	3	Approved
MA 404	Foundation of Approximation Theory	2-1-0	3	Approved
MA 406	Graph Theory	2-1-0	3	Approved
MA 408	Mathematical Theory of Waves	2-1-0	3	Approved
MA 414	Time Series Analysis	2-1-0	3	Approved
MA 416	Integral Equations	2-1-0	3	Approved



(Professor Suhas S. Joshi)
Director and Chairperson, Senate



(Mr. S. P Hota)

Registrar and Secretary, Senate

