Indian Institute of Technology Indore

Minutes of the 43rd meeting of the Senate held on May 15, 2024 (Wednesday) 15:00 hrs. 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. Srivathsan Vasudevan (present online)	Dean, Student Affairs
4	Prof. Suman Mukhopadhyay (present online)	Dean, Alumni and Corporate Relations
Head of Departments		
5	Dr. Priyansh Singh	Acting HoD, Civil Engineering
6	Dr. Ranveer Singh	HoD, Computer Science and Engineering
7	Prof. Vivek Kanhangad	HoD, Electrical Engineering
8	Prof. Shanmugam Dhinakaran	HoD, Mechanical Engineering
9	Dr. Ajay Kumar Kushwaha (present online)	HoD, Metallurgical Engineering and Materials Science
10	Dr. Manoneeta Chakraborty	Acting HoD, Astronomy, Astrophysics and Space Engineering
11	Prof. Preeti A. Bhobe	HoD, Physics
12	Prof. Ruchi Sharma (present online)	HoD, Humanities and Social Sciences
Professors		
13	Prof. Neelesh Kumar Jain (present online)	Mechanical Engineering
14	Prof. Suman Mukhopadhyay (present online)	Chemistry
15	Prof. Krushna R. Mavani	Physics
16	Prof. Vipul Singh	Electrical Engineering
17	Prof. Prabhat Kumar Upadhyay (present online)	Electrical Engineering
18	Prof. Trapti Jain (present online)	Electrical Engineering
19	Prof. Mukesh Kumar	Electrical Engineering
20	Prof. Dhinakaran Shanmugam	Mechanical Engineering
21	Prof. Aruna Tiwari (present online)	Computer Science and Engineering
22	Prof. Prashant Kodgire	Biosciences and Biomedical Engineering
23	Prof. Sk. Safique Ahmad	Mathematics

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24	Prof. Biswarup Pathak (present online)	Chemistry
25	Prof. Nirmala Menon	Humanities and Social Sciences
26	Prof. Pritee Sharma	Humanities and Social Sciences
27	Prof. Ruchi Sharma (present online)	Humanities and Social Sciences
28	Prof. Preeti Anand Bhobe	Physics
29	Prof. Swadesh Kumar Sahoo	Mathematics
30	Prof. Raghunath Sahoo	Physics
31	Prof. Amod C. Umarikar	Electrical Engineering
32	Prof. Vivek Kanhangad	Electrical Engineering
33	Prof. Srivathsan Vasudevan (present online)	Electrical Engineering
34	Prof. Ankhi Roy	Physics
35	Prof. Rupesh Shivaji Devan	Metallurgical Engineering and Materials Science
36	Prof. Santosh Sattappa Hosmani (present online)	Metallurgical Engineering and Materials Science
Other Authorities		
37	Dr. Jayaprakash Murugesan (present online)	Chief Warden
38	Dr. Anand Petare	Workshop Superintendent, Central Workshop
Special Invitees		
39	Dr. Eswara Prasad Korimilli	Chemical Engineering
40	Dr. Rajan Singh	Chemical Engineering
41	Mr. Neeraj Kumar	Assistant Registrar, Academic Affairs
42	Mr. Tapesh Parihar	Section Officer, Academic Office
Secretary		
43	Mr. S. P. Hota	Registrar, IIT Indore
Leave of absence		
44	Prof. Himanshu Rai	Director, IIM Indore
45	Dr. Shankar V. Nakhe	Director, RRCAT
46	Prof. Abhiram G. Ranade	Professor, Department of Computer Science and Engineering, IIT Bombay
47	Prof. Sandeep Chaudhary	Dean, Administration
48	Prof. Avinash Sonawane	Dean, International Relation
49	Prof. Manish Kumar Goyal	Dean, Infrastructure Development
50	Prof. I. A. Palani	Dean, Research and Development
51	Prof. Abhishek Srivastava	Dean, Faculty Affairs
52	Prof. Devendra L. Deshmukh	Dean, Educational Outreach
53	Prof. Amit Kumar	HoD, Biosciences and Biomedical Engineering
54	Prof. Tushar Kanti Mukherjee	HoD, Chemistry

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55	Dr. Niraj Kumar Shukla	HoD, Mathematics
56	Prof. Narendra S. Choudhary	Computer Science and Engineering
57	Prof. Anand Parey	Mechanical Engineering
58	Prof. Ram Bilas Pachori	Electrical Engineering
59	Prof. Abhinav Kranti	Electrical Engineering
60	Prof. Vimal Bhatia	Electrical Engineering
61	Prof. Rajneesh Misra	Chemistry
62	Prof. Subhendu Rakshit	Physics
63	Prof. Sarika Jalan	Physics
64	Prof. Sandeep Chaudhary	Civil Engineering
65	Prof. Avinash Sonawane	Biosciences and Biomedical Engineering
66	Prof. G. S. Murthy	Biosciences and Biomedical Engineering
67	Prof. Santosh Kumar Vishvakarma	Electrical Engineering
68	Prof. Shaibal Mukherjee	Electrical Engineering
69	Prof. Manish Kumar Goyal	Civil Engineering
70	Prof. Neelima Devarakonda Satyam	Civil Engineering
71	Prof. I. A. Palani	Mechanical Engineering
72	Prof. Bhupesh Kumar Lad	Mechanical Engineering
73	Prof. Santosh Kumar Sahu	Mechanical Engineering
74	Prof. Ritunesh Kumar	Mechanical Engineering
75	Prof. Abhishek Srivastava	Computer Science and Engineering
76	Prof. Kapil Ahuja	Computer Science and Engineering
77	Prof. Abhirup Datta	Astronomy, Astrophysics and Space Engineering
78	Prof. Amit Kumar	Biosciences and Biomedical Engineering
79	Prof. Apurba Kumar Das	Chemistry
80	Prof. Sampak Samanta	Chemistry
81	Prof. Sanjay Kumar Singh	Chemistry
82	Prof. Rajesh Kumar	Physics
83	Prof. Sudeshna Chattopadhyay	Physics
84	Prof. Parasharam M. Shirage	Metallurgical Engineering and Materials Science
85	Prof. Devendra L. Deshmukh	Mechanical Engineering
86	Prof. Pankaj Ramesh Sagdeo	Physics
87	Prof. Somaditya Sen	Physics
88	Prof. Mobin Shaikh	Chemistry
89	Prof. Tushar Kanti Mukherjee	Chemistry
90	Prof. Anjan Chakrabory	Chemistry
91	Prof. Satya Silendra Bulusu	Chemistry
92	Prof. Chelvam Venkatesh	Chemistry
93	Prof. Kiran Bala	Biosciences and Biomedical Engineering
94	Prof. Mirza Saqib Baig	Biosciences and Biomedical Engineering

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95	Prof. Anirban Sengupta	Computer Science and Engineering
97	Prof. Neminath Hubballi	Computer Science and Engineering
98	Prof. Antony Vijesh Villavarayan	Mathematics
99	Prof. Niraj Kumar Shukla	Mathematics
100	Prof. Satyajit Chatterjee	Mechanical Engineering
101	Prof. Kazi Sabiruddin	Mechanical Engineering
102	Prof. Pavan Kumar Kankar	Mechanical Engineering
103	Dr. Sharad Gupta	Convener, Health Center Advisor Committee
104	General Secretary, Student Gymkhana	Ex-officio
105	Academic Secretary, Student Gymkhana	Ex-officio

ITEM 43.1: Welcome and Opening remarks by the Chairperson, Senate.

The Chairperson, Senate welcomed all the members to the meeting. He also welcomed Dr. Rajan Singh, newly joined Assistant Professor in the Department of Chemical Engineering. He informed that with this meeting the syllabi of 2nd year of all departments except Chemical Engineering will be completed.

ITEM 43.2: Confirmation of the minutes of the 42nd meeting of Senate held on April 17, 2024.

The Senate confirmed the final minutes of its 42nd meeting of Senate held on April 17, 2024 after incorporating the appropriate suggestions received from the Senate members.

ITEM 43.3: Action Taken Report (ATR) on minutes of 42nd meeting of Senate held on April 17, 2024.

The Senate noted the actions taken on the decisions of the 42nd meeting of Senate held on April 17, 2024.

ITEM 43.4: Course structure of 2nd year and syllabi of the courses of 3rd semester for B.Tech. 'Chemical Engineering' w.r.t. the NEP guidelines.

Convener, B.Tech. Chemical Engineering presented the Course structure of 2nd year and Syllabi of the courses of 3rd semester for B.Tech. 'Chemical Engineering' w.r.t. the NEP guidelines.

After thorough deliberations, the Senate resolved the following **Course structure of 2nd year** and **Syllabi of the courses of 3rd semester** with the remarks as mentioned against each course:

Course Code	Course Name	Weekly Contact Hours L-T-P	Total Credits	Senate remarks:
2nd Year (Semester-3)				
ZZ xxx	Course-I for Minor Program	x-x-x	3	-
MA 205	Complex Analysis	3-1-0-2 (1/2 semester)	2	Already approved. (It was an existing course as MA-203: Complex Analysis and Differential Equations-II (3-1-0-4). Now, the course has been split into two half semester courses as MA 205: Complex Analysis and MA 207: Differential Equations-II.)
MA 207	Differential Equations-II	3-1-0-2 (1/2 semester)	2	
ChE 201	Chemical Engineering Thermodynamics	2-1-0	3	Approved
ChE 203	Transport Phenomena	2-1-0	3	Approved
ChE 205	Materials Science for Chemical Engineers	2-1-0	3	Approved with suggestion to mention the title of each module of the course content.
ChE 207	Chemical Process Calculations	2-1-0	3	Approved
ChE 251	Heat and Mass Transfer Lab	0-0-2	1	Approved
ChE 255	Materials Characterization lab	0-0-2	1	Approved
ChE 2xx	Department Elective -1	2-1-0	3	-
Total		13-6-4 (23)	21/24	
2nd Year (Semester-4):				

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ZZ xxx	Course-II for Minor Program	x-x-x	3	-
MA 204N	Numerical Methods	2-0-2	3	Already approved.
ChE 202	Fluid Mechanics	2-1-0	3	Approved the Course structure only.
ChE 204	Chemical Reaction Engineering	2-1-0	3	
ChE 206	Separation processes	2-1-0	3	
ChE 254	Reaction Engineering lab	0-0-2	1	
ChE 252	Fluid Mechanics lab	0-0-2	1	
ChE 256	Computational Chemical Engineering Lab -1	0-0-3	1.5	Shifted from Semester-3 to Semester-4 as per the suggestion received from the Chairperson, Senate. Approved the Course structure only.
ChE 2xx	Department Elective – 2	2-1-0	3	-
ZZ 2xx	Institute Open Elective – 1	2-1-0	3	-
	Total	12-5-9 (26)	21.5/24.5	-
Elective Courses (Department Elective-I)				
ChE 209	Introduction to Soft Matter and Polymers	2-1-0	3	Approved.
ChE 211	Waste to Energy Conversion	2-1-0	3	Approved with suggestion to add one more textbook. Reference Book No-3 'Fuel and Energy' should be mentioned as textbook.

Agenda: 43.5: Proposal for Ph.D. program in the Department of Chemical Engineering.

Convener, Department of Chemical Engineering presented the proposal for a Ph.D. program in the Department of Chemical Engineering.

After the detailed discussion, the Senate approved the proposal for a Ph.D. program in the Department of Chemical Engineering with following **course structure** with remarks as given below:

i) In the MEQ, master's degree should be mentioned specifically as M.Tech./M.E./M.S.(Res.).

ii) The M.Sc. degree as mentioned on Note no. (2) is replaced by four years of B.E./B.Tech. or equivalent.

iii) The total number of Ph.D. seats under TA category for Chemical Engineering department was approved as 7 instead of 5.

Semester-I (Autumn / Spring)

Sr. No.	Course code	Course Title	L-T-P-Credits
1	ZZ xxx	Elective-I	x-x-x-3
2	ZZ xxx	Elective-II	x-x-x-3
3	ZZ xxx	Elective-III	x-x-x-3
4	ChE 797*/ ChE 798*	Ph.D. Seminar Course	0-2-0-2

Semester-II (Autumn / Spring)

Sr. No.	Course code	Course Title	L-T-P-Credits
1	ZZ xxx	Elective-I	x-x-x-3
2	ZZ xxx	Elective-II	x-x-x-3
3	ZZ xxx	Elective-III	x-x-x-3
4	ChE 797*/ ChE798*	Ph.D. Seminar Course	0-2-0-2

Courses for Elective I -III (Apart from the electives listed below, a student can choose any elective from the Ph.D. courses being offered by the other departments.)

Sr. No.	Course code	Course Title	L-T-P-Credits
1	PH 650	Numerical Methods	2-0-2-3
2	CH 606	Chemical and Statistical Thermodynamics	2-1-0-3

3	BSE 627	Research Methodology and Scientific Communications Skills	0-0-2-1
4	MM 659	Introduction to Soft Materials	2-1-0-3
5	MM 645	Multiphysics Modeling	2-0-2-3
6	ME 604	Microfluidics	2-1-0-3
7	BSE 605	Molecular Biophysics	2-1-0-3
8	BSE 607	Bioremediation: Principles & Practices	2-1-0-3
9	MM 604	Transport Phenomenon	2-1-0-3
10	MSE 605	Computational Techniques in Materials Engineering	2-1-0-3
11	MM 603	Applied Surface Science	2-1-0-3
12	MM 661	Material Science and Engineering	2-1-0-3
13	ME 418/ ME 618	Computational Fluid Dynamics	2-1-0-3
14	CH 708	Catalysis: Approaches and Application	2-1-0-3
15	CH 705	Material Chemistry	2-1-0-3
16	CH 701	Spectroscopic Techniques	2-1-0-3
13	CS 357/ EE 603	Optimization Algorithms and Techniques	2-1-0-3

ITEM: 43.6: Proposal for Ph.D. program in "Digital Humanities and Environmental Humanities" from the JP Narayan National Centre of Excellence in the Humanities.

Convener, JP Narayan National Centre of Excellence in the Humanities presented the Proposal for a Ph.D. program in the center.

After the discussion, the Senate approved the proposal for a Ph.D. program in the JP Narayan National Centre of Excellence in the Humanities with following course structure with remarks as given below:

i) UGC-NET/GATE qualified students will be considered under JPN Centre' Funded Fellowship which will be limited to 2 seats under FAP category for AY 2024-25. The total number of seats may be increased/decreased based on the fund granted to the Center during the subsequent years of admissions.
ii) However, there is no upper bound in terms of number of students joining under non-TA category.
iii) Course DEH 601: Research Methods in Humanities approved by the Senate.

Semester-I (Autumn/Spring)

Sl. No.	Course code	Course Title	L-T-P-Credits
1.	ZZ XXX	Elective -1	X-X-X-3
2	ZZ XXX	Elective -2	X-X-X-3
3	ZZ XXX	Elective -3	X-X-X-3
4	DEH 797/ DEH 798	Ph.D. Seminar Course	0-2-0-2

Total credits	11

Semester-II (Spring/Autumn)

Sl. No.	Course Code	Course Title	L-T-P-Credits*
1	ZZ XXX	Elective -1	X-X-X-3
2	ZZ XXX	Elective -2	X-X-X-3
3	ZZ XXX	Elective -3	X-X-X-3
4	DEH 797/ DEH 798	Ph.D. Seminar Course	0-2-0-2
Total credits		11	

- Total minimum credit requirements for MPhil or equivalent qualified students are 11 credits. (3 Theory courses and 1 Seminar course).
- Total minimum credit requirements for MA or equivalent qualified students are 17 credits. (5 Theory courses and 2 Seminar courses.)

List of Elective Courses (Indicative):

Sl. No.	Course code	Course Title	L-T-P-Credits
1	HS 455/655	Digital Humanities	3-0-0-3
2	HS 615	Humanities and Technology	3-0-0-3
3	HS 410/610	Media Studies	3-0-0-3
4	HS 418/618	Sustainability Studies	3-0-0-3
5	HS 626	Environmental and Natural Resource Economics	3-0-0-3
6	HS 611	Philosophy of Natural Sciences	3-0-0-3
7	AA 410/610	Spatial Informatics	2-1-0-3
8	CE 418/618	Disaster Management	2-1-0-3

ITEM: 43.7: Proposed new courses for UG/PG/Ph.D. program.

The proposals of new courses presented by HoD/ Convener, DPGC of the respective different departments. After the discussion, the Senate resolved these courses with the following remarks as given below:

S. N	Course code Title of the Course	Contact Hours	Program for which course is offered	Senate remarks:
1	BSE 442/642 Fundamentals of Neuroscience	2-1-0-3	UG, PG and PhD	Approved
2	BSE 443/643 Applied Biomechanics	2-1-0-3	UG, PG and PhD	Approved with suggestions to shift the Reference book-4 to Textbook-1 and textbook no-3 to textbook-2.

				Textbook-2 should be Reference book-1
3	BSE 444/644 Biomedical Signal and Image Processing	2-1-0-3	UG, PG and PhD	Approved with suggestion to add one more basic module in the course content.
4	CS 214: Introduction to Blockchain	2-0-2-3	UG	Approved.
5	CS 444/ CS 644: Advanced Blockchain	2-1-0-3	UG, PG and PhD	Approved.
6	CS 446/ CS 666: Blockchain for Responsible Computing	2-1-0-3	UG, PG and PhD	Approved
7	PH 215: Geometrical Methods in Physics	2-1-0-3	UG	Some examples should be included in the course content. Approved.
8	PH 218: Introduction to General Relativity	2-1-0-3	UG	Approved

ITEM 43.8: Items for Information:

43.8.a: Approval for inclusion of new GATE paper 'Data Science and Artificial Intelligence (DA)' as qualifying examination (QE) for M.Tech./ M.S. (Research) program in the department of Computer Science and Engineering.

The Senate approved the same.

43.8.b: Approval to change the name of executive M.Tech. program offered for the employee of Volvo Eicher Commercial Vehicles Ltd. (VECV) from Electric Vehicle Technology to Hybrid and Electric Vehicle Technology.

The Senate approved the same.

ITEM 43.9: Any other item with the permission of the Chair.

Nil.

(Mr. S. P. Hota)
Registrar and Secretary, Senate

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