Indian Institute of Technology Indore
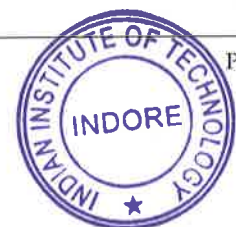
Minutes of the 47ᵗʰ meeting of the Senate held on November 20, 2024 (Wednesday) 15:00 hrs. at Maitreyi Seminar Hall, IIT Indore.

Following members attended the meeting:

Chairperson		
1	Prof. Suhas S. Joshi	Director, IIT Indore
Deans		
2	Prof. Ankhi Roy	Officiating Dean, Academic Affairs
3	Prof. Sandeep Chaudhary	Dean, Administration
4	Prof. Avinash Sonawane	Dean, International Relation
5	Prof. Manish Kumar Goyal	Dean, Infrastructure Development
6	Prof. I. A. Palani (present online)	Dean, Research and Development
7	Prof. Suman Mukhopadhyay (present online)	Dean, Alumni and Corporate Relations
8	Prof. Abhishek Srivastava (present online)	Dean, Faculty Affairs
9	Prof. Devendra L. Deshmukh	Dean, Educational Outreach
Head of Departments		
10	Dr. Abhishek Rajput	HoD, Civil Engineering
11	Dr. Ranveer Singh (present online)	HoD, Computer Science and Engineering
12	Prof. Vivek Kanhangad	HoD, Electrical Engineering
13	Prof. Shanmugam Dhinakaran	HoD, Mechanical Engineering
14	Dr. Ajay Kumar Kushwaha	HoD, Metallurgical Engineering and Materials Science
15	Dr. Parimal Kar	HoD, Biosciences and Biomedical Engineering
16	Prof. Abhirup	HoD, Astronomy, Astrophysics and Space Engineering
17	Prof. P. R. Sagdeo	Acting HoD, Physics
18	Prof. Ruchi Sharma	HoD, Humanities and Social Sciences
Professors		
19	Prof. Neelesh Kumar Jain (present online)	Mechanical Engineering
20	Prof. Abhinav Kranti (present online)	Electrical Engineering
21	Prof. Suman Mukhopadhyay (present online)	Chemistry
22	Prof. Krushna R. Mavani	Physics
23	Prof. Sandeep Chaudhary	Civil Engineering

24	Prof. Avinash Sonawane	Biosciences and Biomedical Engineering
25	Prof. Shaibal Mukherjee (present online)	Electrical Engineering
26	Prof. Vipul Singh (present online)	Electrical Engineering
27	Prof. Prabhat Kumar Upadhyay (present online)	Electrical Engineering
28	Prof. Mukesh Kumar	Electrical Engineering
29	Prof. Manish Kumar Goyal	Civil Engineering
30	Prof. I. A. Palani (present online)	Mechanical Engineering
31	Prof. Bhupesh Kumar Lad (present online)	Mechanical Engineering
32	Prof. Ritunesh Kumar	Mechanical Engineering
33	Prof. Dhinakaran Shanmugam	Mechanical Engineering
34	Prof. Aruna Tiwari	Computer Science and Engineering
35	Prof. Abhishek Srivastava (present online)	Computer Science and Engineering
36	Prof. Abhirup Datta	Astronomy, Astrophysics and Space Engineering
37	Prof. Sk. Safique Ahmad	Mathematics
38	Prof. Apurba Kumar Das	Chemistry
39	Prof. Sampak Samanta	Chemistry
40	Prof. Nirmala Menon	Humanities and Social Sciences
41	Prof. Pritee Sharma (present online)	Humanities and Social Sciences
42	Prof. Ruchi Sharma	Humanities and Social Sciences
43	Prof. Sudeshna Chattopadhyay	Physics
44	Prof. Parasharam M. Shirage	Metallurgical Engineering and Materials Science
45	Prof. Raghunath Sahoo	Physics
46	Prof. Vivek Kanhangad	Electrical Engineering
47	Prof. Devendra L. Deshmukh	Mechanical Engineering
48	Prof. Pankaj Ramesh Sagdeo	Physics
49	Prof. Ankhi Roy	Physics
50	Prof. Mobin Shaikh (present online)	Chemistry
51	Prof. Chelvam Venkatesh (present online)	Chemistry
52	Prof. Anirban Sengupta (present online)	Computer Science and Engineering
53	Prof. Rupesh Shivaji Devan	Metallurgical Engineering and Materials Science
54	Prof. Santosh Sattappa Hosmani	Metallurgical Engineering and Materials Science
55	Prof. Antony Vijesh Villavarayan	Mathematics
56	Prof. Satyajit Chatterjee	Mechanical Engineering

57	Prof. Kazi Sabiruddin (present online)	Mechanical Engineering
58	Prof. Pavan Kumar Kankar (present online)	Mechanical Engineering
59	Prof. Surya Prakash	Computer Science and Engineering
60	Prof. Somnath Dey	Computer Science and Engineering
61	Prof. Sanjaram Premjit Khanganba	Humanities and Social Sciences
62	Prof. M. Tanveer	Mathematics
63	Prof. Shailesh Kundalwal	Mechanical Engineering
Special Invitees		
64	Prof. Kirti Trivedi	Visiting Distinguished Professor
65	Dr. Eswara Prasad Korimilli (Convener, B.Tech. Chemical)	Metallurgical Engineering and Materials Science
66	Mr. Neeraj Kumar	Deputy Registrar, Academic Affairs
67	Mr. Tapesh Parihar	Section Officer, Academic Office
Secretary		
68	Mr. S. P. Hota	Registrar, IIT Indore
Leave of absence		
69	Prof. Himanshu Rai	Director, IIM Indore
70	Shri. Unmesh D. Malshe	Director, RRCAT
71	Prof. Abhiram G. Ranade	Professor, Department of Computer Science and Engineering, IIT Bombay
72	Prof. Srivathsan Vasudevan	Dean, Student Affairs
73	Prof. Niraj Kumar Shukla	HoD, Mathematics
74	Prof. Tushar Kanti Mukherjee	HoD, Chemistry
75	Prof. Narendra S. Choudhary	Computer Science and Engineering
76	Prof. Anand Parey	Mechanical Engineering
77	Prof. Ram Bilas Pachori	Electrical Engineering
78	Prof. Vimal Bhatia	Electrical Engineering
79	Prof. Rajneesh Misra	Chemistry
80	Prof. Subhendu Rakshit	Physics
81	Prof. Sarika Jalan	Physics
82	Prof. G. S. Murthy	Biosciences and Biomedical Engineering
83	Prof. Santosh Kumar Vishvakarma	Electrical Engineering
84	Prof. Trapti Jain	Electrical Engineering
85	Prof. Neelima Devarakonda Satyam	Civil Engineering
86	Prof. Santosh Kumar Sahu	Mechanical Engineering
87	Prof. Kapil Ahuja	Computer Science and Engineering
88	Prof. Amit Kumar	Biosciences and Biomedical Engineering
89	Prof. Prashant Kodgire	Biosciences and Biomedical Engineering
90	Prof. Sanjay Kumar Singh	Chemistry

91	Prof. Biswarup Pathak	Chemistry
92	Prof. Preeti Anand Bhobe	Physics
93	Prof. Rajesh Kumar	Physics
94	Prof. Swadesh Kumar Sahoo	Mathematics
95	Prof. Amod C. Umarikar	Electrical Engineering
96	Prof. Srivathsan Vasudevan	Electrical Engineering
97	Prof. Somaditya Sen	Physics
98	Prof. Tushar Kanti Mukherjee	Chemistry
99	Prof. Anjan Chakrabory	Chemistry
100	Prof. Satya Silendra Bulusu	Chemistry
101	Prof. Kiran Bala	Biosciences and Biomedical Engineering
102	Prof. Mirza Saqib Baig	Biosciences and Biomedical Engineering
103	Prof. Neminath Hubballi	Computer Science and Engineering
104	Prof. Niraj Kumar Shukla	Mathematics
105	Prof. Sharad Gupta	Biosciences and Biomedical Engineering
106	Dr. Jayaprakash Murugesan	Chief Warden
107	Prof. Sharad Gupta	Convener, Health Center Advisor Committee
108	Dr. Anand Petare	Workshop Superintendent, Central Workshop
109	Dr. Rajan Singh	(Convener, DUGC Chemical Engineering)
110	General Secretary, Student Gymkhana	Ex-officio
111	Academic Secretary, Student Gymkhana	Ex-officio

ITEM 47.1: **Welcome and Opening remarks by the Chairperson, Senate.**

The Chairperson, Senate welcomed all the members to the meeting. The Chairperson informed the Senate members that IIT Indore signed an MoU with National Law Institute University (NLIU), Bhopal to facilitate to offer a unique joint degree program in 'Cyber Security and Cyber Law' provide a comprehensive understanding of legal aspects of cyber security and foster research and innovation in the domain of cyber security and cyber law.

The Institute also signed a MoU with Army Training Command (ARTRAC) like an umbrella MoU with all Military Technical Training Institutes (MITI) including Military College of Telecommunication Engineering (MCTE), Mhow to mutually facilitate and work together toward fulfilling the needs of academic resource sharing, indigenous solutions of Military Problem Definition Statement (PDS) and industry interaction.

Further, it was informed that IIT Indore has also signed an MoU with National Automative Test Tracks (NATRAX) to conduct joint research and technology development projects on various areas like road safety, sustainability, etc.

ITEM 47.2: Confirmation of the minutes of the 46th Meeting of the Senate held on 25 September 2024.

The Senate confirmed the minutes of 46th Meeting of the Senate held on 25 September 2024.

ITEM 47.3: Action Taken Report (ATR) on minutes of 46th Meeting of the Senate held on 25 September 2024.

The Senate noted the actions taken on the decisions of the 46th Meeting of the Senate held on 25 September 2024.

ITEM 47.4: U.G. course structure of Bachelor of Design (B. Des.) Program.

Prof. Avinash Sonawane and Prof. Devendra Deshmukh presented the details about the Bachelor of Design program along with the course structure of all eight semesters.

After the discussion, the Senate approved in-principal the Bachelor of Design (B. Des.) Program and resolved its **course structure** with the following remarks:

(i) The B. Des. program will commence from the Academic Year 2025-2026.
(ii) Courses on 'Design Thinking' can be included in future in B. Des. program.
(iii) More specialized verticals can be included in future, like, Rural development, etc.
(iv) The core specialization name 'System Engineering/System Theory' should be 'System Design'.
(v) A basket of elective courses can be provided, which can include courses like, Toy Design, AI/ ML for Design, UX-UI Design, Design for Manufacturing, etc.
(vi) Minor program may be included in future.
(vii) Course Code of the courses will be 'SI XXX'.
(viii) Initially electives of the B.Des. program will be offered in the following verticals:
- Urban System
- Healthcare System
- Educational Technology
- Sustainable Energy

Along with the B. Des. Program, the Senate also approved to establish 'School of Innovation' under which B. Des. program will run.

Semester 1

Code	Course list	L	T	P	Credit
SI 1XX	Design as Problem Solving	2	0	2	3
SI 1XX	Verbal and Visual Expression	0	0	4	2
SI 1XX	Design Methodology	2	0	2	3
SI 1XX	General Systems Thinking	2	1	0	3
SI 1XX	Understanding Innovation	2	0	0	2
SI 1XX	Mini Project 1	0	2	6	5
Total		8	3	14	18

Semester 2

Code	Course list	L	T	P	Credit
SI 1XX	Design Research	2	2	0	4
SI 1XX	Problem Understanding	2	0	0	2
SI 1XX	Graphics and Data Visualization	2	0	2	3
SI 1XX	Photo and Video Communication	2	0	2	3
SI 1XX	Design Systems	2	0	0	2
SI 1XX	Mini Project 2	0	2	6	5
Total		10	4	10	19

Semester 3

Code	Course list	L	T	P	Credit
SI 2XX	Systems Approach to Design	2	0	2	3
SI 2XX	Ideation Techniques	2	0	2	3
SI 2XX	Innovation Case Studies	2	0	2	3
SI 2XX	Need Identification	2	0	2	3
SI 2XX	Elective 1	X	X	X	3
SI 2XX	Research Project 1	0	5	2	6
Total		10	5	12	21

Semester 4

Code	Course list	L	T	P	Credit
SI 2XX	Technology Tracking	2	0	2	3
SI 2XX	Graphic Communication	2	0	2	3
SI 2XX	Innovation Incubation	2	0	2	3
SI 2XX	Project Report Design	2	0	2	3
SI 2XX	Elective 2	X	X	X	3
SI 2XX	Research Project 2	0	6	2	7
Total		10	6	12	22

Semester 5

Code	Course list	L	T	P	Credit
SI 3XX	Presentation Techniques	0	0	4	2
SI 3XX	Experience Design	2	0	2	3
SI 3XX	Planning and Conducting Pilots	2	0	2	3
SI 3XX	Documentation and Analysis	2	0	2	3
Electives (one to be chosen from the following verticals)					

SI 3XX	Elective 3	X	X	X	3
SI 3XX	Field Project 1	0	4	4	6
Total		8	4	16	20

Semester 6

Code	Course list	L	T	P	Credit
SI 3XX	Communities and Culture	2	0	2	3
SI 3XX	Financial Planning and Budget	2	0	2	3
SI 3XX	Project Monitoring Techniques	2	0	2	3
SI 3XX	IPR and Technology Transfer	2	0	2	3
SI 3XX	Elective 4	X	X	X	3
SI 3XX	Field Project 2	0	4	4	6
Total		10	4	14	21

Semester 7

Code	Course list	L	T	P	Credit
SI 4XX	Systems Design (Individual)	0	2	2	3
SI 4XX	Systems Design (Collaborative)	0	3	2	4
SI 4XX	Research Project 3	0	10	4	12
Total		0	15	8	19

Semester 8

Code	Course list	L	T	P	Credit
SI 4XX	Project Management and Professional Practice	2	0	2	3
SI 4XX	Final B. Des. Project	0	10	10	15
Total		2	10	12	18

Electives: Courses for electives 1 to 4, one to be chosen from the following verticals:

Urban System (US)
Healthcare System (HS)
Educational Technology (ET)
Sustainable Energy (SE)

ITEM 47.5: Syllabus of proposed new courses.

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. No.	Course code and Title of the Course	Contact Hours (L-T-P-C)	Senate Remarks:
1	AA 315: Data Analytics and Visualization for Space	0-1-4-3	Approved.

2	ChE 210: Introduction to Metabolic Engineering	2-1-0-3	Approved with remarks to club the module-3 and 4 and named as Simulation of Flux Analysis. (ii) Instead of computer codes use term simulation. (iii) Reference Book no.-3 should be as per prescribed format.
3	EE 218: Synchronous and Special Electrical Machines	2-1-0-3	Approved with remarks to mark the course content of each part by bullet points instead of mentioning any module number.
4	HS 431: Innovation and Intellectual Property Rights	2-1-0-3	Approved with remarks to make the paragraph content into bullet points.

ITEM: 47.6: Minor modification in the name of the course EE 212: Power Electronics as EE 212: Basic Power Electronics.

The Senate approved the minor modification in the name of the course EE 212: Power Electronics as EE 212: Basic Power Electronics.

ITEM: 47.7: Reporting Items:

Item No- 47.7.1: Minor modification in the name of B.Tech. in Space Science and Engineering

The Senate approved the same.

ITEM: 47.8: 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