सीनेट की एकसौतीनवीं बैठक का कार्यवृत्त

MINUTES OF THE 103RD MEETING OF THE SENATE

19 दिसम्बर 2024 19th DECEMBER 2024



भारतीय प्रौद्योगिकी संस्थान रूड़की रूड़की — 247 667 (भारत) INDIAN INSTITUTE OF TECHNOLOGY ROORKEE ROORKEE – 247 667 (INDIA)

भारतीय प्रौद्योगिकी संस्थान रूड़की INDIAN INSTITUTE OF TECHNOLOGY ROORKEE रूड़की 247 667 ROORKEE – 247 667



सूची/INDEX

मुद्दा सं0/	Idaum / Dontious long	गास्त्र /
Item	विवरण / Particulars	पृष्ठ /
		Page(s)
No. 103.1	सीनेट की दिनांक 18.07.2024 को आयोजित हुई 102वीं बैठक के कार्यवृत्त की पुष्टि करना। To confirm the minutes of the 102 nd Senate meeting held on 18.07.2024.	2
103.2	सीनेट की दिनांक 18.07.2024 को आयोजित हुई 102वीं बैठक में लिए गए निर्णयों के क्रियान्वयन पर की गई कार्यवाही को रिपोर्ट करना। To report on the actions taken to implement the decisions of the Senate taken in its 102nd meeting held on	
103.3	एम.डेस (औद्योगिक डिजाइन) कार्यक्रम में प्रवेश के लिए न्यूनतम शैक्षिक योग्यता और चयन मानदंड में संशोधन पर विचार करना। To consider the modification in the Minimum Educational Qualification and selection criteria for admission to M.Des.	2
103.4	(Industrial Design) programme. पॉलिमर एवम् प्रोससिंग इंजीनियरिंग विभाग में पीएचडी कार्यक्रम में प्रवेश के लिए न्यूनतम शैक्षिक योग्यता (एमईक्यू) में संशोधन पर विचार करना। To consider the revision in the Minimum Educational Qualification (MEQ) for admission to Ph.D. programme in the Department of Polymer & Process Engineering.	

103.5	सत्र 2025–26 से सतत् ऊर्जा अभियांत्रिकी में एम.टेक. कार्यक्रम शुरू करने के संबंध में सतत् ऊर्जा केंद्र के प्रस्ताव और इसके कार्यक्रम ढांचे पर विचार करना। To consider the proposal of the Centre for Sustainable Energy regarding introduction of M.Tech. programme in Sustainable Energy Engineering w.e.f. the session 2025-26 alongwith its program structure.	3
103.6	बैचलर ऑफ डिजाइन (बी.डेस) के कार्यक्रम ढांचे में संशोधन के संबंध में डिजाइन विभाग के प्रस्ताव पर विचार करना। To consider the proposal of the Department of Design regarding revision in the programme structure of Bachelor of Design (B.Des.).	3
103.7	एम.टेक. कार्यक्रमों के संशोधित नाम के प्रस्ताव पर विचार करना। To consider the proposal regarding renaming of M.Tech. programmes.	4
103.8	जेम 2025 के माध्यम से एमएससी प्रवेश के लिए सीट मैट्रिक्स पर विचार करना। To consider the seat matrix for M.Sc. Admission through JAM 2025.	4
103.9	मानविकी एवम् सामाजिक विज्ञान विभाग में एम.एस.सी अर्थशास्त्र कार्यक्रम में प्रवेश के लिए टेस्ट पेपर में परिवर्तन करने पर विचार करना। To consider the change(s) in test papers for admission to M.Sc. Economics Programme in the Department of Humanities & Social Sciences.	4
103.10	ऑटम सेमेस्ट में नियमित प्रवेश के अतिरिक्त स्प्रिंग सेमेस्टर में अंतर्राष्ट्रीय उम्मीदवारों सहित प्रायोजित श्रेणी के अंतर्गत एम.टेक./एम.आर्क./एमयूआरपी कार्यक्रम में प्रवेश के प्रस्ताव पर विचार करना। To consider the proposal for admission to M.Tech./M.Arch./MURP programme under sponsored category and International candidates in the Spring Semester in addition to regular admission in Autumn Semester.	4
103.11	एकीकृत शिक्षक शिक्षा कार्यक्रम (आईटीईपी) के अंतर्गत 4 वर्षीय बीएससी—बीएड कार्यक्रम की पेशकश की व्यवहार्यता पर संचालन सिमित की रिपोर्ट पर विचार करना। To consider the report of the Steering Committee on feasibility of offering the 4-year B.ScB.Ed. programme under the Integrated Teachers Education Programme (ITEP).	5

103.12	वास्तुकला एवम् नियोजन विभाग में पीएचडी के लिए पंजीकरण कराने वाले छात्रों को कुछ मानदंडों को पूरा करने के अधीन दो डिग्री (एम.आर्क. /एमयूआरपी और पीएचडी) प्रदान करने के प्रस्ताव, जिसके तहत वास्तुकला एवम् नियोजन विभाग करने को, पर विचार करना । To consider the proposal of the Department of Architecture and Planning to offer Two-Degrees (M.Arch./MURP and Ph.D.) to the students who register for Ph.D. in the Department of Architecture and Planning subject to fulfilment of few criteria.	5
103.13	बी.टेक. (सिविल अभियांत्रिकी) कार्यक्रम के लिए ईएससी बास्केट के अंतर्गत एक पाठयक्रम को प्रतिस्थापित करने के लिए सिविल अभियांत्रिकी विभाग के अनुरोध पर विचार करना। To consider the request of the Department of Civil Engineering to replace one course under ESC basket for the B.Tech. (Civil Engineering) programme.	6
103.14	नये पीजी पाठयक्रम के अनुसार विभागों से प्राप्त कार्यक्रम संरचना में संशोधन पर विचार करना। To consider the revision in programme structures received from the Departments as per the new PG curriculum.	6
103.15	परीक्षा के दौरान अनुचित साधनों के प्रयोग से निपटने के संबंध में दिशानिर्देशों की समीक्षा करने के लिए समिति की रिपोर्ट पर विचार करना। To consider the report of the Committee to review the guidelines w.r.t. handling of Unfair Means during examination.	6
103.16	आईआईटी रूड़की में 'अकेडिमक बैंक ऑफ क्रेडिट' की स्थापना और संचालन के प्रस्ताव पर समिति की सिफारिश पर विचार करना। To consider the recommendation of the Committee on the proposal for establishment and operation of the Academic Bank of Credits at IIT Roorkee.	6
103.17	नए यूजी पाठयक्रम के अंतर्गत गैर-क्रेडिट तत्वों के मूल्यांकन से संबंधित प्रस्ताव पर विचार करना। To consider the proposal regarding evaluation of Non-credit Elements under New UG Curriculum.	7
103.18	डिग्री के प्रारूप में निम्नलिखित परिवर्तनों के संबंध में प्रस्ताव पर विचार करना। अ. यूजी और पीजी दोनों के लिए डिग्री टेम्पलेट से सीजीपीए को हटाना। ब. एम.टेक. डिग्री में विभाग के नाम और उसकी विशेषज्ञता को मानकीकृत करना।	8

	To consider the proposal regarding the following changes in the format of the degree: a) To remove CGPA from the degree template for both UG and PG. b) To standardize the name of the department and its specialization in M.Tech. degree.	
103.19	मध्यावधि परीक्षाओं के दौरान चिकित्सा आधार/असाधारण परिस्थितियों पर द्वितीय परीक्षा विकेन्द्रीकरण पर विचार करना। To consider decentralization of the Second Examination on Medical grounds/extraordinary circumstances during Mid Term Examinations.	8
103.20	संकाय पदों के लिए विभिन्न चयन समितियों में सीनेट के नामांकित व्यक्तियों के पैनल पर विचार करना। To consider the panel of the Senate's Nominees for the various Selection Committees for Faculty positions.	8
103.21	दानदाता आधारित छात्रवृत्ति/पुरस्कार के लिए न्यूनतम राशि में संशोधन पर विचार करना। To consider the revision in the minimum amount for donor-based Scholarships/Awards.	8
103.22	टयूशन फीस माफी (टीएफडब्ल्यू) और छात्रवृत्ति के बीच अंतर करने के प्रस्ताव पर विचार करना। To consider the proposal to differentiate between Tuition Fee Waiver (TFW) and Scholarships.	9
103.23	सीनेट के अध्यक्ष द्वारा दिए गए अनुमोदन की रिर्पाट देना। To report the approvals accorded by the Chairman, Senate.	9
AnnI	दिनांक 19.12.2024 को उपस्थित सदस्यों की सूची। List of members present on 19.12.2024.	10-12
Ann-II	दिनांक 19.12.2024 को सदस्यों की सूची जिन्होंने बैठक में शामिल होने में असमर्थता व्यक्त की है। List of members who conveyed their inability to join the meeting on 19.12.2024.	13
AppA	सतत् ऊर्जा अभियांत्रिकी में एम.टेक. कार्यक्रम की कार्यक्रम संरचना। Program structure of M.Tech. programme in the Centre for Sustainable Energy Engineering.	14-16

АррВ	डिजाइन विभाग के बैचलर ऑफ डिजाइन (बी.डेस) के संशोधित कार्यक्रम की संरचना। Revised programme structure of Bachelor of Design (B.Des.) programme of the Department of Design.	17-28
AppC	जेम 2025 के माध्यम से एमएससी प्रवेश के लिए सीट मैट्रिक्स । Seat matrix for M.Sc. Admission through JAM 2025.	29
AppD	दो डिग्री प्रदान करने के लिए दिनांक 16.03.2023 का अधिसूचित मानदण्ड। Notified criteria dated 16.03.2023 to offer Two-Degrees.	30
AppE	नये पीजी पाठयक्रम के अनुसार विभागों की संशोधित कार्यक्रम संरचना। Revised programme structures of the Departments as per the new PG curriculum.	31-47
AppF	परीक्षा के दौरान अनुचित साधनों के प्रयोग से निपटने के संबंध में दिशानिर्देश। The guidelines for handling the cases of Unfair Means during examination.	48-58
AppG	आईआईटी रूड़की में 'अकेडिमक बैंक ऑफ क्रेडिट' की स्थापना और संचालन के प्रस्ताव पर समिति की सिफारिश। The recommendation of the Committee to establish and operation of the Academic Bank of Credits at IIT Roorkee.	59-62
АррН	यूजी डिग्री टेम्पलेट का प्रारूप। Format of UG Degree template.	63
AppI	पीजी डिग्री टेम्पलेट का प्रारूप। Format of PG Degree template.	64
AppJ	वसंत सेमेस्टर 2024–25 के लिए शैक्षणिक कैलेंडर। Academic Calendar for Spring Semester 2024-25.	65-66



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE MEETING SECTION



Minutes of the 103rd Meeting of the Senate held on 19.12.2024 at 03.00 P.M. in the Senate Hall.

The list of participants who attended the meeting and those who have conveyed their inability to attend are appended at **Annexure-I & Annexure-II** respectively.

At the outset, the Senate observed two minutes silence to pay tribute to late Prof. B.K. Kaushik, Department of Electronics & Communication Engineering who while in service untimely passed away on 01.08.2024.

The Chairman welcomed the following new members and wished for their active participation in the proceedings of the Senate.

- 1. Prof. Indrajit Ghosh, Civil Engineering
- 2. Prof. Sonalisa Ray, Civil Engineering
- 3. Prof. Prateek Kumar Jha, Chemical Engineering
- 4. Prof. Shabina Khanam, Chemical Engineering
- 5. Prof. Prasenjit Kar, Chemistry
- 6. Prof. Sateesh Kumar Peddoju, Computer Science and Engineering
- 7. Prof. Biplab Bhattacharva, Earth Sciences
- 8. Prof. Pitambar Pati, Earth, Sciences
- 9. Prof. Premalata Jena, Electrical Engineering
- 10. Prof. Arnab Datta, Electronics and Communication Engineering
- 11. Prof. Bishnu Prasad Das, Electronics and Communication Engg.
- 12. Prof. Karun Rawat, Electronics and Communication Engineering
- 13. Prof. Aditi Gangopadhyay, Mathematics
- 14. Prof. Ankik Kumar Giri, Mathematics
- 15. Prof. Madhu Jain, Mathematics
- 16. Prof. Ram Krishna Pandey, Mathematics
- 17. Prof. Arup Kumar Das, Mechanical and Industrial Engineering
- 18. Prof. Anil Kumar, Mechanical and Industrial Engineering
- 19. Prof. Avinash Parashar, Mechanical and Industrial Engineering
- 20. Prof. Manish Madhay Joglekar, Mechanical and Industrial Engg.
- 21. Prof. Vikram Vasant Dabhade, Metallurgical and Materials Engg.
- 22. Prof. Soumitra Satapathi, Physics
- 23. Prof. Pradip Kumar Maji, Polymer and Process Engg.
- 24. Prof. Jeevanand S., Associate Dean, Infra. (Electrical & A/C)



Thanks was also placed on record for the valuable contributions of the following outgoing members:

- 1. Prof. Satyendra Mittal, Department of Civil Engg.
- 2. Prof. Kamal Jain, Department of Civil Engg.
- 3 Prof. A.K. Saraf, Department of Earth sciences
- 4 Prof. Anubrata Dey, Associate Dean, Infra. (Electrical & AC)

The Senate meeting was adjourned for want of quorum at start of meeting. The Chairman, Senate given a ruling to re-convene the meeting at 3.30 p.m. Meeting was accordingly held at 3.30 p.m. after notifying the rescheduled timing.

The agenda was then taken up.

Item No. 103.1: To confirm the minutes of the 102nd Senate meeting held on 18.07.2024.

No comment was received. Minutes of 102^{nd} meeting of the Senate as circulated on 08.08.2024 were confirmed.

Item No. 103.2: To report on the actions taken to implement the decisions of the Senate taken in its 102nd meeting held on 18.07.2024.

The Senate noted the actions taken on the minutes.

Item No.103.3: To consider the modification in the Minimum Educational Qualification and selection criteria for admission to M.Des. (Industrial Design) programme.

The Senate considered and approved the following modification in Minimum Educational Qualification (MEQ) and selection criteria for admission to the M.Des. (Industrial Design) programme.

Name of programme	Minimum Educational Qualification	Selection criteria
M.Des. (Industrial Design)	Four-year Graduate Degree in any discipline with Mathematics as one of the subjects in 10+2 with valid CEED score.	Screening based on CEED score and shortlisting based on Aptitude Test. Shortlisted candidates shall be required to appear in the Personal Interview.



Item No.103.4: To consider the revision in the Minimum Educational Qualification (MEQ) for admission to Ph.D. programme in the Department of Polymer & Process Engineering.

The Senate considered and approved the following revision in the Minimum Educational Qualification (MEQ) for admission to Ph.D. programme:

Name of Departmen		MEQ
		B.E./ B.Tech. / M.E./M.Tech. /M.Sc./
		M.S./B.Pharm./M.Pharm./B.S.(4-year) in
Engineering		any branch of Engineering & Science.

Item No.103.5: To consider the proposal of the Centre for Sustainable Energy regarding introduction of M.Tech. programme in Sustainable Energy Engineering w.e.f. the session 2025-26 alongwith its program structure.

The Senate considered the proposal and approved the introduction of the following M.Tech. programme in the Centre for sustainable Energy alongwith its program structure (**Appendix-A**) w.e.f the session 2025-26:

Name of programme	Minimum Educational Qualification	GATE disciplines & Intake	
M.Tech.	B.Tech./ B.E degree in Engineering	All	
programme in	Physics, Mechanical, Electronics and	Engineering	
Sustainable	Communication, Materials Science and	and Science	
Energy	Engineering, Computer Science,	branches.	
Engineering.	Electrical, Chemical, Nanotechnology,		
	Biotechnology or	Intake: 15	
	allied engineering disciplines and M.Sc.		
	in Physics, Chemistry, Bioscience (or		
	equivalent) with minimum first class.		

Item No.103.6: To consider the proposal of the Department of Design regarding revision in the programme structure of Bachelor of Design (B.Des.).

The Senate considered and approved the revised programme structure of Bachelor of Design (B.Des.) (Appendix-B).

Item No.103.7: To consider the proposal regarding renaming of M.Tech. programmes.

The Senate considered the proposal, and approved renaming of the following M.Tech. Programmes:

Existing M.Tech. Programme	Revised (renaming) M.Tech. Programme	Departments	
Instrumentation and Signal Processing	Advanced Instrumentation and Artificial Intelligence	Electrical Engineering	
Communication Systems	Communication Network and Signal Processing	Electronics and Communication Engineering	
Machine Design Engineering CAD, CAM and Robotics	Mechanical System Design Robotics and Automation	Mechanical and Industrial Engineering	
Thermal Engineering	Fluid and Thermal Engineering		

Item No.103.8: To consider the seat matrix for M.Sc. Admission through JAM 2025.

The Senate considered and approved the seat matrix for M.Sc. Admission though JAM 2025 given at **Appendix-C.**

Item No.103.9: To consider the change(s) in Test Paper for admission to M.Sc. Economics Programme in the Department of Humanities & Social Sciences.

The Senate considered and approved to include both Mathematics (MA) and Mathematical Statistics (MS) papers in addition to Economics (EN) for admission to M.Sc. Economics Programme in the Department of Humanities & Social Sciences.

Item No.103.10: To consider the proposal for admission to M.Tech./M.Arch./MURP programme under sponsored category and International candidates in the Spring Semester in addition to regular admission in Autumn Semester.

The Senate considered the proposal and approved that the deferred admissions of autumn semester to all PG Programmes in the forthcoming Spring Semester of the academic year be considered on the recommendation of the HoD of the department/centre/school concerned, (the Dean-IR in case of International students) and the DoAA, by the Chairperson Senate, on case to case basis.

Item No.103.11: To consider the report of the Steering Committee on feasibility of offering the 4-year B.Sc.-B.Ed. programme under the Integrated Teachers Education Programme (ITEP).

The Senate considered the report-cumrecommendations of the Steering Committee and accepted the same in principle.

Further, the Senate recommended the following to the Board for approval and to consider for MoE concurrence:

- i. That 4-year B.Sc-B.Ed. (Secondary Stage) programme under the Integrated Teachers Education Programme (ITEP) be started at Saharanpur Campus of IIT Roorkee.
- ii. Admission for this programme will be through the Entrance Examination conducted by IIT Roorkee (may be called B.Ed Entrance Examinations) from NCET qualified candidates.
- iii. Total intake for this programme will be initially 50 in the disciplines of Mathematics & Chemistry (@ 25 each).
- iv. An ITEP Implementation Committee (ITEPIC) be established for the operationalization of this Programme.

Item No.103.12: To consider the proposal of the Department of Architecture and Planning to offer Two-Degrees (M.Arch./MURP and Ph.D.) to the students who register for Ph.D. in the Department of Architecture and Planning subject to fulfilment of few criteria.

The Senate considered and approved to offer Two-Degrees (M.Arch./MURP and Ph.D.) to the students who register for Ph.D. in the Department of Architecture and Planning subject to fulfilment of the criteria mentioned in the notification ref no: Acad/1293/Senate-93 dated 16.03.2023. (Appendix-D).



Item No.103.13: To consider the request of the Department of Civil Engineering to replace one course under ESC basket for the B.Tech. (Civil Engineering) programme.

The Senate approved the proposal to take CEE-102: Mechanics of Solid (04 credits) course under Engineering Science Basket for B.Tech. (Civil Engineering) programme.

Item No.103.14: To consider the revision in programme structures received from the Departments as per the new PG curriculum.

The Senate approved the following revised structures (**Appendix-E**) under new PG curriculum.

S. No.	Department	Programme	Model	Appen- dixes
1	Polymer and Process Engineering	M.Tech. Polymer Science and Engineering	Model-2	A
		M.Tech. Soil Dynamics	Model-2	В
2 Earthquake		M.Tech. Structural Dynamics	Model-2	B1
	Engineering	M.Tech. Seismic Vulnerability and Risk Assessment	Model-2	B2

Item No.103.15: To consider the report of the Committee to review the guidelines w.r.t. handling of Unfair Means during examination.

The Senate approved the guidelines for handling the cases of Unfair Means during examination. (Appendix-F)

Item No.103.16: To consider the recommendation of the Committee on the proposal for establishment and operation of the Academic Bank of Credits at IIT Roorkee.

The Senate approved the recommendations of the Committee as modified by the IAPC to establish & operation of the Academic Bank of Credits at IIT Roorkee.(Appendix-G).

The Senate advised further to exclude Semester Exchange programmes from this guideline.

Item No.103.17: To consider the proposal regarding evaluation of Noncredit Elements under New UG Curriculum.

The Senate approved the following evaluation methodology of Non-credit Elements under new UG curriculum as recommended by the IAPC:

Non-Credit Elements			For 5-year UG programmes Maxi. Mini. Units Units		Evaluation by	Methodology
Components						
Discipline	16	8	20	10	DoSW	This will be evaluated by the DoSW with 02 units assigned to each semester on 0-2 scale.
NCC/NSS/NSO	8	4	8	4	DoSW	This will be evaluated by the DoSW with the help of the concerned Professor(s) Incharge of NCC/ NSS/ NSO. One unit is assigned to each semester on 0-2 scale.
Internship	24	8	32	10	By the deptt.	This will be evaluated by the Department/ School/ Centre. One week of internship will be equivalent to 1 unit.
Participation in professional development programs by industry experts/field experts (PPD- 1 & PPD-2)	8	4	12	6	By the deptt.	This will be evaluated by the Department/ School/ Centre and equivalency will also be decided by the Department/ School/ Centre.
Minimum Non-Credits Units to be earned		24		30		



Item No.103.18: To consider the proposal regarding the following changes in the format of the degree:

- a) To remove CGPA from the degree template for both UG and PG.
- b) To standardize the name of the department and its specialization in M.Tech. degree.

The Senate approved the following:

- 1. Drop CGPA and division from the degree template for both UG and PG.
- 2. Name of the department and specialization in M.Tech. degree be mentioned in Degree as in sample formats of UG and PG Degree at **Appendix-H** and **Appendix-I** respectively.

Item No.103.19: To consider decentralization of the Second Examination on Medical grounds/extraordinary circumstances during Mid Term Examinations.

The Senate approved the proposal on decentralization of the second examination on medical grounds /extraordinary circumstances during mid-term examinations.

Item No.103.20: To consider the panel of the Senate's Nominees for the various Selection Committees for Faculty positions.

The Senate considered and approved the Panel of Senate Nominees. This panel will be valid for a period of five years effective from 19.12.2024.

Item No.103.21: To consider the revision in the minimum amount for donor-based Scholarships/Awards.

The senate considered and approved the minimum revised amount of Scholarships & Awards of Rs.20000/-, with minimum donation of Rs. 5 lakhs for the perpetual sustainability of the corpus. In case the donor gives lessor amount, the award will continue until the corpus is exhausted. This will be applicable for existing awards/scholarships also.



Item No.103.22: To consider the proposal to differentiate between Tuition Fee Waiver (TFW) and Scholarships.

The Senate considered and approved that the Tuition Fee Waiver (TFW) be considered a scheme instead of a Scholarship.

Item No.103.23: To report the approvals accorded by the Chairman, Senate.

The Senate noted the item.

The Senate approved the modifications in the Academic Calendar for Spring Semester 2024-25. (Appendix-J).

Further, the Senate advised that the Academic Calendar for Autumn Semester 2025-26 should be placed before the Senate for consideration.

The meeting ended with a vote of thanks to the Chair.

1 5 JAN 2925

Annexure-I

Following were present

		iii
1.	Prof. K.K. Pant	Director & Chairman
2.	Prof. U.P. Singh	Dy. Director
3.	Prof. Mahua Mukherjee	Architecture & Planning
4.	Prof. Pravindra Kumar	Biosciences & Bioengineering
5.	Prof. Naveen Kumar Nawani	Biosciences & Bioengineering
6.	Prof. Gopinath Packirisamy	Biosciences & Bioengineering
7.	Prof. Ranjana Pathania	Biosciences & Bioengineering
8.	Prof. Ramasare Prasad	Biosciences & Bioengineering
9.	Prof. Shailly Tomar	Biosciences & Bioengineering
10.	Prof. Amit Kumar Dhiman	Chemical Engineering
11.	Prof. Shabina Khanam	Chemical Engineering
12.	Prof. Vimal Kumar	Chemical Engineering
13.	Prof. Prasenjit Mondal	Chemical Engineering
14.	Prof. Ram Prakash	Chemical Engineering
15.	Prof. Vimal Chandra Srivastava	Chemical Engineering
16.	Prof. R.K. Dutta	Chemistry
17.	Prof. Prasenjit Kar	Chemistry
18.	Prof. Paritosh Mohanty	Chemistry
19.	Prof. R.K. Peddinti	Chemistry
20.	Prof. Muniappan Sankar	Chemistry
21.	Prof. Anuj Sharma	Chemistry
22.	Prof. Rahul Dev Garg	Civil Engineering
23.	Prof. Praveen Kumar	Civil Engineering
24.	Prof. Priti Maheshwari	Civil Engineering
25.	Prof. K.S. Hari Prasad	Civil Engineering
26.	Prof. Rajat Rastogi	Civil Engineering
27.	Prof. Rajdeep Niyogi	Computer Science & Engineering
28.	Prof. Sateesh Kumar Peddoju	Computer Science & Engineering
29.	Prof. R.N. Dubey	Earthquake Engineering
30.	Prof. S.C. Gupta	Earthquake Engineering
31.	Prof. Daya Shankar	Earthquake Engineering
32.	Prof. Manish Shrikhande	Earthquake Engineering
33.	Prof. Sunil Bajpai	Earth Sciences
34.	Prof. Biplab Bhattacharya	Earth Sciences
35.	Prof. G.J. Chakrapani	Earth Sciences
36.	Prof. Abhayanand Singh Maurya	Earth Sciences
		//



37.	Prof. Pitambar Pati	Earth Sciences
38.	Prof. C.P. Gupta	Electrical Engineering
39.	Prof. Yogesh Vijay Hote	Electrical Engineering
40.	Prof. Premalata Jana	Electrical Engineering
41.	Prof. Dheeraj Kumar Khatod	Electrical Engineering
42.	Prof. Vishal Kumar	Electrical Engineering
43.	Prof. Manoj Tripathy	Electrical Engineering
44.	Prof. Barjeev Tyagi	Electrical Engineering
45.	Prof. Anand Bulusu	Electronics & Communication Engg.
46.	Prof. Bishnu Prasad Das	Electronics & Communication Engg.
47.	Prof. Sanjeev Manhas	Electronics & Communication Engg.
48.	Prof. N.P. Pathak	Electronics & Communication Engg.
49.	Prof. Anindya Jayanta Mishra	Humanities & Social Sciences
50.	Prof. M.K. Jain	Hydrology
51.	Prof. Ramesh Chandra	Institute Instrumentation Centre
52.	Prof. Rajat Agarwal	Management Studies
53.	Prof. Rajib Lochan Dhar	Management Studies
54.	Prof. Vinay Sharma	Management Studies
55.	Prof. Sandip Banerjee	Mathematics
56.	Prof. Aditi Gangopadhyay	Mathematics
57.	Prof. Ammeya Kumar Nayak	Mathematics
58.	Prof. Akshay Dvivedi	Mechanical & Industrial Engg.
59.	Prof. Anil Kumar	Mechanical & Industrial Engg.
60.	Prof. Manish Mishra	Mechanical & Industrial Engg.
61.	Prof. Avinash Parashar	Mechanical & Industrial Engg.
62.	Prof. V.H. Saran	Mechanical & Industrial Engg.
63.	Prof. Dhish Kumar Saxena	Mechanical & Industrial Engg.
64.	Prof. Apurbba Kumar Sharma	Mechanical & Industrial Engg.
65.	Prof. Inderdeep Singh	Mechanical & Industrial Engg.
66.	Prof. Indra Vir Singh	Mechanical & Industrial Engg.
67.	Prof. Sudhakar Subudhi	Mechanical & Industrial Engg.
68.	Prof. Andallib Tariq	Mechanical & Industrial Engg.
69.	Prof. Vikram Vasant Dabhade	Mechanical & Industrial Engg.
70.	Prof. B.S.S. Daniel	Metallurgical & Materials Engg.
71.	Prof. Rajdeep Chatterjee	Physics
72.	Prof. Aalok Misra	Physics
73.	Prof. Vipul Rastogi	Physics
74.	Prof. Soumitra Satapathi	Physics
75.	Prof. Yogesh Kumar Sharma	Physics
76.	Prof. Ghanshyam Das Verma	Physics

77.	Prof. Davinder Kaur Walia	Physics
78.	Prof. Ajay Wasan	Physics
79.	Prof. Thanga Raj Chelliah	WRD&M
80.	Prof. M.L. Kansal	WRD&M
81.	Prof. Uttam Kumar Roy, Head of the	e Centre of Transportation Systems.
82.	Prof. Mukesh Kumar Singhal, Head	, Department of Hydro & Renewable Energy
83.	Prof. Ramudu Meka, Associate Dear	n for Corporate Interaction.
84.	Prof. Falguni Pattanaik, ADOAA (Cu	rriculum)

85. Prof. Pradeep Srivastava, ADoAA (Evaluation)

- Dr. Sanjeev Kumar Sunny, Actg. Librarian 86.
- Mr. Prashant Garg, Registrar & Secretary, Senate 87.

Students' representative

- Sri Prathyusha Bandi, Convener, Students' Affairs Council 88.
- Ms. Divya Singh, General Secretary Academic Affairs (PG) 89.

Annexure-II

The following members conveyed their inability to join the meeting.

- 1. Prof. Rajan Arora, Deptt. of Applied Mathematics and Scientific Computing
- 2. Prof. Jaydev Dabas, Deptt. of Applied Mathematics and Scientific Computing
- 3. Prof. Gaurav Raheja, Department of Architecture & Planning
- 4. Prof. Sanjoy Ghosh, Department of Biosciences and Bioengineering
- 5. Prof. Partha Roy, Department of Biosciences and Bioengineering
- 6. Prof. Debabrata Sircar, Department of Biosciences and Bioengineering
- 7. Prof. Prakash Biswas, Department of Chemical Engineering
- 8. Prof. Satish Chandra, Professor of Civil Engineering
- 9. Prof. C.S.P. Oiha, Department of Civil Engineering
- 10. Prof. N.K. Samadhiya, Department of Civil Engineering
- 11. Prof. Bhavesh Kumar Bhalja, Department of Electrical Engineering
- 12. Prof. P. Sumathi, Department of Electrical Engineering
- 13. Prof. Sudeb Dasgupta, Department of Electronics and Communication Engg.
- 14. Prof. Karun Rawat, Department of Electronics and Communication Engg.
- 15. Prof. Sunil Kumar Singhal, Hydro & Renewable Energy
- 16. Prof. Dhyan S. Arya, Department of Hydrology
- 17. Prof. Brijesh Kumar Yadav, Department of Hydrology
- 18. Prof. Sumit Sen, Department of Hydrology
- 19. Prof. Rashmi Gaur, Department of Humanities & Social Sciences
- 20. Prof. Nagendra Kumar, Department of Humanities & Social Sciences
- 21. Prof. Maheshanand, Department of Mathematics
- 22. Prof. Bhupendra K. Gandhi, Department of Mech. and Ind. Engineering
- 23. Prof. Pradeep Kumar Jha, Department of Mech. and Ind. Engineering
- 24. Prof. Kaushik Pal, Department of Mechanical and Industrial Engineering
- 25. Prof. S.H. Upadhyay, Department of Mechanical & Industrial Engineering
- 26. Prof. B. Venkata Manoj Kumar, Department of Metallurgical and Materials Engineering
- 27. Prof. Indranil Lahiri, Department of Metallurgical and Materials Engineering
- 28. Prof. Binoy K. Patra, Department of Physics
- 29. Prof. K.L. Yadav, Department of Physics
- 30. Prof. Sujay Chattopadhyay, Department of Polymer and Process Engineering
- 31. Prof. Gaurav Manik, Department of Polymer and Process Engineering
- 32. Prof. Deepak Khare, Department of WRD&M
- 33. Prof. Ashish Pandey, Department of WRD&M

Student's representative

34. Sri Balaga Pavan Sai, General Secretary AA UG

1 5 JAN 2025

CENTRE FOR SUSTAINABLE ENERGY INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

XXX M.Tech. (Sustainable Energy Engineering)
Centre for Sustainable Energy

Program Code Department ,

Year Model Exam Duration

Practical

Треогу

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et 'eek	<u>r</u>		0	2	2	2				9	(1)	ï		,	ı	
Contact Hours/Week	F		_	0	0	0	(1)			•	ī	ř.	Ē	1	1	
Hor	П		3	3	3	3	000			л	(00)		.1:	а	•	
	Credits		4	4	4	4	2	18		4	4	4	4	3	7	2.1
	Subject Area		PCC	PCC	PCC	PCC	SSC			PEC	PEC	PEC	PEC	STAR	SEM	
Teaching Scheme	Course Title	Semester-I (Autumn)	Sustainable Energy and Environment	Theory and Simulation for Chemical Reactions	Energy Conversion Technologies	Energy Storage Technologies	Social Science Course	Total	Semester-II (Spring)	Program Elective-I	Program Elective-II	Program Elective-III	Program Elective-IV	Science, Technology, and Advanced Research-tools	Seminar	Total
	Subject Code		SEC-501	SEC-503	SEC-505	SEC-507									SEC-700	
	.oV.2		-3	2.	3	4	5.			_1	ci	3	4	5	6.	

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DEPARTMENT OF CENTRE FOR SUSTAINABLE ENERGY INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code : XXX M.Tech. (Sustainable Energy Engineering)
Department : Centre for Sustainable Energy
Year II
Model : 2

ım tion	Practical		10				į.	
Exam Duration	Тћеогу		i)	ý				
	۵		1	4			¥	
Contact Hours/Week	F		ı	Ä			ï	
C	7		١	1			ì	
	Credits		3	10	13		14	14
	Subject Area		ISA	THESIS			THESIS	
Teaching Scheme	Course Title	Semester-I (Autumn)	Internship Social Activity	SEC-701A Thesis Stage-I	Total	Semester-11 (Spring)	SEC-701B Thesis Stage-II	Total
	Subject Code		SEC-691	SEC-701A			SEC-701B	
	.oV.2			7			-	

Su	Summary			
Semester	1	2	3	4
Semester-wise Total Credits	18	21	13	14
Total Credits		99	2	



M.Tech. (Sustainable Energy Engineering)

<u>Program Elective Courses</u>

	Practical													
Exam Duration	feritaged	0	0	0	0	0	0	0	0	0	0	0	0	0
Dur	Тһеогу	3	3	3	3	3	3	m	n	c	m	n	3	n
eek	۵	0	0	0	0	0	0	0	0	0	0	0	0	0
Contact Hours/Week	Н	-	_	1	-	-	-	-	-	-	-	-	-	-
Hou	L	3	3	3	m	3	т	'n	ĸ	3	3	3	3	m
	Credits	4	4	4	4	4	4	4	4	4	4	4	4	4
	Subject Area	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC
Teaching Scheme	Course Title	AI/ML for Energy Systems	Battery: Design, Development and Deployment	Solar Photovoltaics: Design and Developments	Recycling and Circular Economy	Hydrogen Economy	Sustainable Energy Systems: Control and Protection	Green Transportation Systems	Energy Market Regulations and Policies	Bioenergy and Sustainability	Modelling and Simulation of Sustainable Energy System	Flexible and Wearable Energy Devices	Materials for Energy Harvesting and Storage	Functional and Operational Aspects of Offshore Wind Energy
	Subject Code	SEL-501	SEL-502	SEL-503	SEL-504	SEL-505	SEL-506	SEL-507	SEL-508	SEL-509	SEL-510	SEL-511	SEL-512	SEL-513
	.oV.2	1	7	3	4	5.	9	7	∞.	9.	10.	Ξ	12.	13,

Social Sciences Courses

am ıtion	Practical	0	0	0
Exam Duration	Тһеогу	2	2	7
:t 'eek	e.	0	0	0
Contact Hours/Week	⊢	0	0	0
Hou	h	2	2	C1
	Credits	C1	2	2
	Subject Area	SSC	SSC	SSC
Teaching Scheme	Course Title	Sustainable Energy: Challenges and Industrial Perspective	Sustainable Transition and Policy	ono
	Subject Code	SES-501	SES-502	SES-503
	.oV.2	.3	2.	3



Appendix 'B'
Item No. Senate / 103.6

	Proposed Credits Range for Revised B. Des. Structure			ļ	49								95					9-12	2		18-20	
	Proposed Credits for Revised B. Des. Structure	9	(A)	16 (Three Courses have been modified as Mathematics for Designers, Science for Designers and Statistical Techniques for Designers)	∞ .	(Three courses i.e. Engineering Mechanics, Basic Electrical Engineering and Fundamental of	Electronics have been removed and the course Manufacturing Processes has been added)	4	3	7	47 (4 Credits have been added, within limit of CCCC)	2	4	2	12 (2 Credits have been added)	22	9	9-12	2	155-158	18-20	173-178
nme	Existing Credits Range for B. Des. Structure				57								68					9-12	2		18-20	
Revised Structure of the B. Des. Programme	Existing Credits for B. Des. Structure	5	3	16		16		4	3	4	43	2	4	2	10	22	6	9-12	2	157-160	18-20	175-180
tructure of th	Approved Credits Range				52-58								87-91	- II				9-12	2	150-160		
Revised S	Approved Credits for B. Tech.	5	3	12-20		8-20		4	3	4	40-48	2	4	2	6-10	22-26	8-9	9-12	2	150-160	18-20	
	Sub Components	HSSEC HSSEC	MC	BSC		ESC		DSC	ESSC	TM	2,202	AI/ML	Engg. Analysis and design (design thinking-based project)/Industry Oriented Problem Solving/Lab based Project/Practical Problem/Case study	Technical Communication	BTP/Entrepreneurship/Project-based internship/PEC	PEC	TEB	OEC	CORE	Total	MSC/DHC	Grand Total
	Main Curriculum Components			\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Core Course	20100 2100	1	L 7				-tri	Programme Core Course	***************************************				Other	Courses			



DEPARTMENT OF DESIGN

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

			Credits (Year - wise)	0	46/48	41/42	28	155-158	173-178
B. Des.	Department of Design	Scheme	Credits in Spring Semester	023	23/24	20	173		8-20 credits
XXX	DOD Depa	Teaching Scheme	Credits in Autumn Semester	20	23/24	21/22	91		With addition 18-20 credits
	••								
Programme Code	Department		Year		2	3	4	Total	Grand Total with MSC/DHC



Comments	To be evaluated by DoSW	To be evaluated by DoSW	1-week internship= 1 unit	(to be coordinated by the deptt. /Centres/School)	To be coordinated by the departments/Centres/school	(2nd& 3rd Years)		led: 24
Minimum Units	∞	4	80		4			Minimum non-credit units to be earned: 24
Maximum Units	16	∞	24		∞			um non-credit
Components	Discipline (DIS)	NCC/NSS/NSO	Internship (INT)		Participation in professional development	programs by Industry experts/ field	experts (PPD-1 & PPD-2)	Minim
Non-Credit Elements	(NCE)							

COLOR	REMARKS
	Courses shifted between semesters
	New Courses added / Modified
	courses (existing courses)



Programme Code : XXX B. Des.
Department : DOD Department of Design
Year : I

30-40 PRE 40-50 30-40 30-40 30-40 ETE 40-50 40-50 30-40 30-40 30-40 40-50 50 Relative Weights (%) 20-30 20-30 15-25 15-25 15-25 20-30 20-30 15-25 20-30 15-25 15-25 MTE PRS 25 25 25 25 20 20 40 25 10-25 20-35 10-25 CWS 10-25 10-25 20-35 20-35 20-35 15-30 15-30 10-25 09 50 Theory Practical Exam Duration 0 0 2 0 0 0 0 0 0 0 0 (Hrs.) 3 N ~ 2 7 N N 3 2 d 0 Ь 4 0 0 4 0 Hours/ Contact Week 0 0 0 0 0 3 _ (Autumn) 7 7 7 (Spring) N 3 7 d Credits 20 n 4 4 N CI 4 3 3 4 4 Subject HSSC HSSC Area BSC BSC PCC ESSC PCC BSC PCC PCC PCC TMI Statistical Techniques for Designers Basic Programming for Designers Basics of IP and Entrepreneurship Elements and Principles of Design Sketching and Form Exploration Feaching Scheme Environmental Science and Indian Knowledge System Mathematics for Designers Course Title Tinkering and Mentoring Introduction to Design Science for Designers Design Methodology Sustainability Soft Skills Total Total Course Code **DEB-102 DEC-106 DEB-103 DEB-101** TMI-102 **DEC-101 DEC-103** IKS-102 **DEC-102 DEC-104** TMI-103 ESS-104 HSI-101 9** *5 9* 2 7 co 0 3 4

The current B. Des. batch (registered in 2024-25) are yet to complete these courses (Sr. No. 5 & 6 in the first-year Autumn semester 2024-25). The current batch be allowed to register these two courses in the spring semester 2024-25.

**The current B. Des. batch (registered in 2024-25) has already completed this course (Sr. No. 6 in the first-year Autumn semester 2024-25). Therefore, the students of this batch, who have got pass grade in the course be exempted from registering in this course in the spring semester 2024-25.



B. Des. Department of Design : XXX : DOD : II Programme Code Department Year

		Teaching Scheme			Ho	Contact Hours/Week	t eek	Exam I (H	Exam Duration (Hrs.)		Relati	Relative Weights (%)	(%) S	
S S	Course	Course Title	Subject Area	Credits	Г	F	Ъ	Theory	Theory Practical	CWS	PRS	MTE	ETE	PRE
				9)	(Autumn)	n)								
	OEC-I	Open Elective Course-I	OEC	3/4										
7	DEC-201	DEC-201 Data Science for Designers	DSC	4	2	0	4	2	0	15-30	20	15-25	30-40	à
~	MTE-103	MTE-103 Material Science	ESC	4	n	_	0	3	0	20-35]((0))	20-30	40-50	6
4	MSI-101	MSI-101 Fundamentals of Management	MC	3	3	0	0	3	0	20-35		20-30	40-50	
S	DEC-203	DEC-203 Visual Representation	PCC	3	-	0	4		+	10-25	25	20-30	200	30-40
9	DEC-205	DEC-205 Engineering Drawing	PCC	3	1	0	4	2	0	10-25	25	15-25	30-40	1
7	DEC-207	Visual Communication (Design Studio)	PCC	3	<u></u>	0	4	(4)		10-25	25	15-25	ж	30-40
		Total		23/24										
					(Spring)	Er.								
-	OEC-II	Open Elective Course-II	OEC	3/4										
7	HSSEC-I	HSS Elective Course	HSSEC	3										
3	MIE-102	Manufacturing Processes	ESC	4	3	1	0	3	0	20-35		20-30	40-50	•
4	BEB -102	BEB -102 Biosciences for Engineers	BSC	4	3	_	0	3	0	20-35	10	20-30	40-50	
5	DEC-202	DEC-202 Introduction to Ergonomics	PCC	3	-	0	4	2	0	10-25	25	15-25	30-40	((#)()
9	DEC-204	DEC-204 History and Contemporary Design	PCC	2	2	0	0	2	0	20-35	•	20-30	40-50	(t .
7	DEC-206	Cognition and Emotion in Creative Design	PCC	2		0	2	2	0	10-25	25	15-25	30-40	
∞	DET-I	Talent Enhancement Course-I	TEB	2							Ē		11	
		Total		23/24										



XXX DOD: Programme Code Department Year

B. Des. Department of Design

		Teaching Scheme			Hon	Contact Hours/Week	t eek	Exam (I	Exam Duration (Hrs.)		Relative	Relative Weights (%)	ts (%)	
S. S.	Course Code	Course Title	Subject Area	Credits	1	I	Ь	Theory	Theory Practical	CWS	PRS	MTE	ETE	PRE
		X		(Autumn	(mmi									
-	OEC-III	Open Elective Course-III	OEC	3/4										
7	DEC-351	Fundamentals of AI/ML	PCC	2	-	0	C1	2	0	10-25	25	15-25	30-40	
m	DEC-301	User Interaction Design	PCC	n	1	0	4				40-60	40-60 20-30	1.5	20-30
4	DEC-303	Product Modeling and Simulation	PCC	3	-	0	4	2	0	10-25	25	15-25	30-40	1
N	DEC-391	Design Communication	PCC	2	0	2	0	î	13413			100		
9	DEC-305	Prototyping (Design Studio)	PCC	4	0	0	∞	,	(00)	10	30-50	10		40-60
~	DEC-399	Community Outreach	CORE	2	0	0	4	ı	201			100		
∞	DET-II	Talent Enhancement Course-II	TEB	2										
		Total		21/22										
				(Spring)	ing)									
-	HSSEC-II	HSS Elective Course	HSSEC	3										
7	DEC-302	User Experience Design	PCC	3		0	4	2	0	10-25	25	15-25	30-40	ű
m	DEC-304	Product Innovation Management and IPR	PCC	2	2	0	0	2	0	20-35	1	20-30	40-50	
4	DEC-300	Practical Problem Solving (Design Studio)	PCC	4	0	0	∞	1 (1)	Ē			100		
S	DEL-I	Program Elective Course-I	PEC	3								h		
9	DEL-II	Program Elective Course-11	PEC	3										
7	DET-III	Talent Enhancement Course-III	TEB	2										
∞	MSC/DHC-I	Minor Specialization Course-I / Departmental Honors Course-I	MSC/ DHC	3/4										
		Total		20/23-24										



Programme Code Department Year

XXX DOD:

B. Des. Department of Design

Teaching Scheme	Teaching Scheme				Cc	Contact Hours/Week	ek k	Exam 1 (H	Exam Duration (Hrs.)		Relativ	Relative Weights (%)	ts (%)	
Course Course Title Subject Area		Subjec Area	+	Credits	7	F	Ь	Theory	T P Theory Practical	CWS PRS MTE	PRS	MTE	ETE	PRE
				(Autumn)	(uu									
DEL-III Program Elective Course-III PEC		PEC		4										
DEL-IV Program Elective Course-IV PEC		PEC		4										
DEL-V Program Elective Course-V PEC		PEC		4										
DEL-VI Program Elective Course-VI PEC		PEC		4							1			
MSC/DHC-II Minor Specialization Course-II / MSC/ Departmental Honors Course-H DHC	Course-II /	MSC/ DHC		3/4										
MSC/DHC-III Minor Specialization Course-III / MSC/ DHC	Course-III /	MSC/ DHC	_	3/4										
Total	Total			16/22-24										
				(Spring)	(gui									
DEP-400 Design Project (Phase-II) PCC		PCC		12	4	,	1	3.				100		
MSC/DHC-IV Minor Specialization Course-IV / MSC/ Departmental Honors Course-IV DHC		MSC/ DHC		3/4										
MSC/DHC-V Departmental Honors Course-V DHC		MSC/ DHC		3/4										
Total	Total			12/18-20										



List of Program Elective Courses

	田田			7,1			TELE			Ιij					
	PRE	i		•		ı.			1	1	.(0).	1	. 1	1.00	1
ıt (%)	ETE	40-50	40-50	30-40	40-50	40-50	40-50	30-40	30-40	30-40	30-40	30-40	30-40	40-50	40-50
Relative Weight (%)	MTE	20-30	20-30	15-25	20-30	20-30	20-30	15-25	15-25	15-25	15-25	15-25	15-25	20-30	20-30
Relativ	PRS	1.	•	25	(1)	#/ /		20	20	20	20	20	20	j.	
	CWS	20-35	20-35	10-25	20-35	20-35	20-35	15-30	15-30	15-30	15-30	15-30	15-30	20-35	20-35
uration (s.)	Practical	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exam Duration (Hrs.)	Theory	3	3	2	3	3	Ċ	3	3	3	3	3	2	ന	3
Contact Hours/Week	Ь	0	0	4	0	0	0	2/2	2/2	2/2	2/2	2/2	4	0	0
Contact ours/Wea	Т	1	1	0	_	-	-	-	1	1	1	1	0	1	1
Ho	L	2	2	1	5	3	3	3	3	3	3	3	2	m	e
	Credits	3	3	3	4	4	4	4	4	4	4	4	4	4	4
	Subject Area	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC
Teaching Scheme	Course Title	Typography	Design for Excellence	Design Storytelling and Narratives	Frugal Product and Process Design	Value Engineering in Product Design	Strategic Design Thinking for Concentric Innovation	DEL-404 Design and Society	Universal Design for Digital Accessibility	Inclusive Design Systems	Design Thinking for Digital Media	Design Futures	DEL-409 Art and Craft Studies	Design Thinking for Complex Societal Challenges	Innovation and Market Development for Value Networks
	Course Code	DEL-301	DEL-302	DEL-303	DEL-401	DEL-402	DEL-403	DEL-404	DEL-405	DEL-406	DEL-407	DEL-408	DEL-409	DEL-410	DEL-411
	S S	-	2.	3	4.	5.	9	7.	00	9.	10.	=	12.	13.	14



List of Department Honors Courses

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ht (%)	ETE	40-50	40-50	30-40	40-50	40-50	40-50	30-40	30-40	30-40	30-40	30-40	30-40	40-50	40-50
Relative Weight (%)	MTE	20-30	20-30	15-25	20-30	20-30	20-30	15-25	15-25	15-25	15-25	15-25	15-25	20-30	20-30
Relat	PRS	110		25			·	20	20	20	20	20	20	i.	
	CWS	20-35	20-35	10-25	20-35	20-35	20-35	15-30	15-30	15-30	15-30	15-30	15-30	20-35	20-35
Exam Duration (Hrs.)	Practical	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exam (F	Theory	3	3	2	m	3	co.	3	3	3	3	3	2	3	ю
ct /eek	Ь	0	0	4	0	0	0	2/2	2/2	2/2	2/2	2/2	4	0	0
Contact Hours/Week	Т	-	-	0	-	-	_	-	1	1	-	-	0		-
CHOU	L	2	7	-	(U	m	3	3	3	3	C.	m	64	3	m.
	Credits	3	23	3	4	4	4	4	4	4	4	4	4	4	4
	Subject Area	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC	DHC
Teaching Scheme	Course Title	Typography	Design for Excellence	Design Storytelling and Narratives	Frugal Product and Process Design	Value Engineering in Product Design	Strategic Design Thinking for Concentric Innovation	Design and Society	Universal Design for Digital Accessibility	Inclusive Design Systems	Design Thinking for Digital Media	Design Futures	Art and Craft Studies	Design Thinking for Complex Societal Challenges	Innovation and Market Development for Value Networks
	Course Code	DEL-301	DEL-302	DEL-303	DEL-401	DEL-402	DEL-403	DEL-404	DEL-405	DEL-406	DEL-407	DEL-408	DEL-409	DEL-410	DEL-411
	S. No.	1.00	2.	3.	4.	5.	.9	7.	∞ .	9.	10.	11.	12.	13.	14.



List of Minor Specialization Courses

		Teaching Scheme			Hol	Contact Hours/Week	ct /eek	Exam.	Exam. Duration		Rela	Relative Weight (%)	ht (%)	
S. No.	Course	Course Title	Subject Area	Credits	J	H	4	Theory	Theory Practical	CWS	PRS	MTE	ETE	PRE
-:	DEC-102	DEC-102 Design Methodology	MSC	3	-	0	4	2	0	10-25	25	15-25	30-40	•
2.	DEC-203	DEC-203 Visual Representation	MSC	3	+	0	4		•	10-25	25	20-30		30-40
÷,	DEC-207	Visual Communication (Design Studio)	MSC	23	1	0	4		• • • • • • • • • • • • • • • • • • • •	10-25	25	15-25		30-40
4.	DEC-204	History and Contemporary Design	MSC	67	61	0	0	2	0	20-35		20-30	40-50	1
5.	DEC-202	DEC-202 Introduction to Ergonomics	MSC	3	1	0	4	2	0	10-25	25	15-25	30-40	•
.9	DEC-301	DEC-301 User Interaction Design	MSC	to.	-	0	4	1	U U	ï	40-60	20-30	1	20-30
7.	DEC-302	DEC-302 User Experience Design	MSC	10	-	0	4	2	0	10-25	25	15-25	30-40	Ť



TALENT ENHANCEMENT COURSES

S. Course Code Course TR No. Code Code 2 DET-101 Solid Modelling 3 DET-103 Design Optiming 4 DET-104 Reverse Enging 5 DET-105 Additive Manual Processirg 6 DET-106 Rapid Prototy 7 DET-107 Automation and Automation and DET-109 8 DET-109 Cloud Computer System Integral DET-110 9 DET-110 Welding Advanced Weld	Teaching Scheme			C Hon	Contact Hours/Week	, k	Exam. I	Exam. Duration		Rela	Relative Weight (%)	çht (%)	
DET-101 DET-102 DET-103 DET-104 DET-105 DET-106 DET-109 DET-110 DET-111 DET-112 DET-113 DET-114	Course Title	Sub. Area	Credits	r	F	P4	Theory	Practical	CWS	PRS	MTE	ETE	PRE
DET-101 DET-102 DET-103 DET-106 DET-106 DET-109 DET-110 DET-111 DET-112 DET-113 DET-114				TEB-A		(DESIGN)							
DET-102 DET-104 DET-105 DET-106 DET-109 DET-110 DET-111 DET-112 DET-113 DET-114	Solid Modelling	TEB	2	0	0	त्त	*	(×	50		ip.	90
DET-103 DET-104 DET-106 DET-107 DET-109 DET-110 DET-111 DET-112 DET-113 DET-114		TEB	2	0	0	4	100	(4)	3	50		4	90
DET-104 DET-105 DET-106 DET-109 DET-110 DET-111 DET-113 DET-113	Design Optimization	TEB	CI	0	0	4	(8)		3	50	Ä	į.	90
DET-104 DET-105 DET-106 DET-107 DET-109 DET-110 DET-111 DET-113 DET-114		TE	3-B (ADI	VITIO	E MA	NUF	TEB-B (ADDITIVE MANUFACTURING	(3)					
DET-105 DET-106 DET-108 DET-109 DET-110 DET-111 DET-113 DET-113	Solid Modeling & Reverse Eneuncering	TEB	2	0	0	ব	ž	1	.00	90	y .	*	50
DET-106 DET-108 DET-109 DET-110 DET-111 DET-113 DET-114	Data Processing for Additive Manufacturing	TEB	7	-	0	C4	*	i	10-25	25	15-25	i)	30-40
DET-107 DET-109 DET-110 DET-111 DET-112 DET-113	Rapid Prototyping	TEB	2	-	0	2	(8)	2901	10-25	25	15-25	æ	30-40
DET-107 DET-108 DET-110 DET-111 DET-112 DET-113 DET-114		TE	TEB-C (INI	(INDUSTRIAL	RIAL	AUT	AUTOMATION	9					
DET-109 DET-110 DET-111 DET-112 DET-113 DET-114	Introduction to Automation	TEB	C1	_	=	0	,		20-35	*	20-30	40-50	
DET-110 DET-111 DET-112 DET-113 DET-114	System Integration	TEB	CI	-	0	2		14.1	10-25	25	15-25	Ą	30-40
DET-110 DET-112 DET-113 DET-114	Cloud Computing	TEB	2	=	0	ci	6	12.	10-25	25	15-25	10)	30-40
DET-110 DET-111 DET-112 DET-113			TEB-D (V	VELD	ING	ENGL	TEB-D (WELDING ENGINEERING)	,					
DET-111 DET-112 DET-113 DET-114	Design Guidelines for Welding	TEB =	۲3	_	0	ΔÎ	-51	34	10-25	25	15-25	i	30-40
DET-112 DET-113 DET-114	Advanced Welding Processes	TEB	6)	-	0	2	94	Œ	10-25	25	15-25		30-40
DET-113	Quality Assurance in Welding	TEB	C1:	_	0	۲3	ă	- 24	10-25	25	15-25	8	30-40
DET-113 DET-114		TEB-E		ITAI	NOL	AL TH	(COMPUTATIONAL THERMO-FLUIDS)	(SGID					
DET-114	Basics of Computational Thermo-fluids	TEB	C	CI.	0	0	91	я	20-35	59	20-30	40-50	¥
	Thermoffuid Simulation Software	TEB	2	0	0	4	а	4	i	50		3	05
BET-115 Problem-	Problem-based Learning with Simulation Tools	TEB	2	0	0	4	х		i	50	1	×	30



			TEB-F (MEASUREMENT IN THERMAL SYSTEMS)	IEASUR	EME	Z.	LHE	KMALS	VSTEMS)					
-	DET-116	Basics of Measurements	TEB	7	2	0	2/2	THE STREET	t	15-30	20	15-25	30-40	¢
	DET-117	Data Acquisition and Analysis	TEB	2	7	0	2	E	5	10-25	25	15-25	Ĕ.	30-40
	DET-118	Instrumentation and measurement techniques	TEB	2	7	0	2/2	•		15-30	20	15-25	30-40	
1			TEB-G	FLUID	MAC	HINE	RY &	TEB-G (FLUID MACHINERY & FLUID POWER)	OWER)					
	DET-119	Introduction to Fluid Machines and Fluid Power	TEB	2	7	0	0	ă.	1	20-35	•	20-30	40-50	×
	DET-120	Hydrodynamic Machines	TEB	2	7	0	272	1		15-30	20	15-25	30-40	×
-	DET-121	Fluid Power Systems	TEB	2	7	0	0		1	20-35	1	20-30	40-50	¥
1				TE	В-Н	MAT	TEB-H (MATERIALS)	(S)						
-	DET-121	Colours and Materials	TEB	2	0	0	4				90	i	3	50
	DET-122	Materials & Manufacturing	TEB	2		0	23	<u>.</u>		10-25	25	15-25	e.	30-40
	DET-123	Materials and Prototyping	TEB	2		0	2		ja .	10-25	25	15-25	a	30-40



Appendix 'C' Item No. Senate / 103.8

Proposed Seat Matrix for M.Sc. Admission through JAM 2025

Programme wise Intake	6	44	33	38	30	35	199
(bwq) TS	~	~	0	0	5	0	Total Intake
-noM) T2 (Dwq	0	2	က	ო	~	ო	Total
SC (Pwd)	0	0	-	~	0		
SC (Non-	ო	7	4	5	4	4	
OBC (bwq)	0	0	0	0	0	_	
OBC (Non-	വ	12	6	10	6	ω	
EMS (bwd)	0	~	0	0	0	0	
EMS (Non-	2	က	3	4	င	4	
Gen (Pwd)	0	0	~	-	0	0	
Gen (Non-	80	18	12	41	12	4	
Paper code	99	СУ	EN/MA/MS	MA	Hd	ВТ	
əpoƏ	1801	1802	1803	1804	1805	1806	
Programme	M.Sc. Applied Geology	M.Sc. Chemistry	M.Sc. Economics	M.Sc. Mathematics	M.Sc. Physics	M.Sc. Biosciences and Bioengineering	
Deptt	Earth Sciences	Chemistry	Humanities and Social Sciences	Mathematics	Physics	Biosciences and Bioengineering	
s oN		2	ю	4	ro.	ω	

Note: If PwD candidate is not available then the seat will be allotted to the candidate of respective category. Seats of PwD category are not over and above the sanctioned intake. The above seat distribution is done in order to maintain the total intake (199)

PwD seat are 5% horizontal and followed by category wise rotation



Appendix 'D'

ACADEMIC AFFAIRS OFFICE Item No. Senate / 103.12 INDIAN INSTITUTE OF TECHNOLOGY ROORKEE Roorkee - 247667

No. Acd./\293 /Senate-93

Dated: March 16, 2023

Subject: Two-degrees (M.Tech. and Ph.D.) (Item No. 93.6)

The Senate in its 93rd meeting held on 28.12.2022 considered and approved the proposal to offer Two-degrees (M.Tech. and Ph.D.) to students who register for Ph.D. and meet certain additional criteria as follows:

- 1. A student admitted in a Ph.D. program with a Master's Degree in an allied discipline. will be awarded M.Tech. degree along with the Ph.D. degree, provided the student earns the course credits (excluding the thesis) required for a M.Tech. program. offered by the parent department/centre/school, with CGPA 8.5 or more.
- 2. A student admitted in a Ph.D. program with a Bachelor's degree will also be awarded M.Tech. degree along with the Ph.D. degree, provided the student meets the requirements as at point (1) above.
- 3. Candidates shall earn all credits for the course work (excluding thesis) of a M.Tech. Programme offered by the parent department/centre/school. The requirement of earning credits for pre-Ph.D. courses will be waived-off for such candidates.
- 4. Fellowship will be allowed for five years from the date of initial registration in the Ph.D. program.
- 5. Other requirements for award of Ph.D. degree shall apply.
- 6. On meeting the requirements, the students shall be eligible for two degrees (M.Tech. & Ph.D.) on defending their Ph. D. theses.
- 7. The exit policy relevant to the Ph.D. program shall be applicable to the students who leave the program prior to completion.

Assistant Registrar (Evaluation)

Copy to (through e-mail):-

- 1. Chairman Senate & Director
- 2. All faculty
- 3. Head of all Departments/ Centres/ School
- 4. Dean, Academic Affairs
- 5. ADoAA (IT Systems & Admission)/ (Curriculum)/ (Evaluation)
- 6. Assistant Registrar (Curriculum)
- 7. Meeting Section
- 8. Channel i / AIS (acad.iitr.ac.in) / Academic webpage of iitr.ac.in



Appendix 'E'

Item No. Senate / 103.14
Following changes are proposed in the program structure of M.Tech. Polymer Science and Engineering:

		Renaming of	PECs
s.	Course	C	ourse Title
No.	Code	Existing	Proposed
1	PEL-502	Statistical Analysis	Applied Numerical Methods and AI
2	PEL-508	Molecular Modelling and Simulation	Applied Molecular Modelling and Simulation
3	PEL-513	Functional Polymer	Functional Polymers and Semiconductors
4	PEL-517	Advanced Polymeric Technology	Paint and Coating Technology
		Introduction of	new PECs
s.	Course	C	ourse Title
No.	Code		
1	PEL-522	Molecular Engineering	
2	PEL-523	Polymers for Energy Generation and	Storage



DEPARTMENT OF POLYMER AND PROCESS ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code : XXX M.Tech. (Polymer Science and Engineering)

Department : Department of Polymer and Process Engineering

Year I

Model : 2

ım tion	Practical		0	0	0	0	0	3	Ĕ			•	¥/	ì	i	ij.	ř	1	
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st eek	<u>C</u>		0	0	0	0	0	9	<u>#</u> /			1		8	*	ą		1	
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	Credits		2	3	3	2	3	3	2	18		3	3	3	c	æ	33	2	20
	Subject Area		PCC	PCC	PCC	PCC	PCC	PCC	SSC			PEC	PEC	PEC	PEC	PEC	STAR	SEM	
Teaching Scheme	Course Title	Semester-I (Autumn)	Polymeric Materials & Their Properties	Polymer Rheology and Physics	Macromolecular Chemistry	Elastomer Technology and Processing	Advanced Polymer Characterization	Polymer Synthesis, Processing and Characterization Lab	Social Science Course	Total	Semester-II (Spring)	Program Elective-I	Program Elective-II	Program Elective-III	Program Elective-IV	Program Elective-V	Science, Technology, and Advanced Research-tools	Seminar	Total
	Subject Code		PEC-501	PEC-503	PEC-505	PEC-507	PEC-509	PEC-511										PEC-700	
	.oV.2			2	3	4,	5.	9	7			3	ci	w	4	5	9	7	



DEPARTMENT OF POLYMER AND PROCESS ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code : XXX M.Tech. (Polymer Science and Engineering)

Department : Department of Polymer and Process Engineering

Year II

Model : 2

n on	Practical		ť				10	
Exam Duration	Треогу			ì			7	
	2		t	ŧ			ī	
Contact Hours/Week	F		1	ı			1	
C	Ţ		*	1			1	
	Credits		4	10	14		14	14
	Subject Area		ISA	THESIS		1	THESIS	
Teaching Scheme	Course Title	Semester-I (Autumn)	Internship Social Activity	PEC-701A Thesis Stage-I	Total	Semester-II (Spring)	Thesis Stage-II	Total
	Subject Code		PEC-691	PEC-701A			PEC-701B	
	.oV.S		:	2.			-	

Sı	Summary			
Semester	1	2	3	4
Semester-wise Total Credits	18	20	14	14
Total Credits		99	2	



M.Tech. (Polymer Science and Engineering)

Program Elective Courses

ım ition	Practical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exam Duration	Треогу	3	3	3	3	3	3	3	m	3	m	m	3	ε	m	m	m	m	κ	m	C.	3	3	3
:t eek	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contact Hours/Week	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C Hou	4	m	m	3	3	т	3	3	3	3	c	n	3	3	3	3	n	3	3	3	3	3	3	3
	Credits	3	3	3	3	3	3	3	3	т	3	3	3	3	8	ĸ	3	3	3	3	3	ж	3	3
	Subject Area	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC
Teaching Scheme	Course Title	Advanced Engineering Mathematics		Process Equipment Design	Advanced Optimization Techniques	Polymer Blends and Composites	Polymer Colloids	Product Standardizations and Regulatory Standards in Polymers	Applied Molecular Modelling and Simulation	Computer Aided Polymer Product Design		Heat and Mass Transfer in Polymeric Materials	Quality Management	Functional Polymers and Semiconductors	High Performance and Conducting Polymers	Polymer Film & Fibre Technology	Polymer Degradation & Recycling	Paint and Coating Technology	Polymer Processing	Polymer Reaction Engineering	Advanced Process Control		Molecular Engineering	
	Subject Code	PEL-501	PEL-502	PEL-503	PEL-504	PEL-505	PEL-506	PEL-507	PEL-508	PEL-509	PEL-510	PEL-511	PEL-512	PEL-513	PEL-514	PEL-515	PEL-516	PEL-517	PEL-518	PEL-519	PEL-520	PEL-521	PEL-522	PEL-523
	.oV.S	-	2.	3	4	5.	9	7.	∞.	9.	10.	1	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.



M.Tech. (Polymer Science and Engineering)

Science, Technology, and Advanced Research-tools Basket

c	Practical		Ĭ
Exam Duration		0	0
Dar	Треогу	3	m
eek	<u>a</u>	0	0
Contact Hours/Week	H	0	0
Hor	٦	3	c
	Credits	3	3
	Subject Area	STAR	STAR
Teaching Scheme	Course Title	Polymers for Advanced Applications	Membrane Fabrication & Applications
	Subject Code	PET-501	PET-502
1		-	-

Social Sciences Courses

am	Practical	0
Exam Duration	Тһеогу	2
t eek	۵	0
Contact Hours/Week	Н	0
Hou	L	2
	Credits	7
	Subject Area	SSC
Teaching Scheme	Course Title	Polymers for Society and Sustainability
	Subject Code	PES-501
	.oV.2	2



DEPARTMENT OF EARTHQUAKE ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code XXX M.Tech. (Soil Dynamics)

Department of Earthquake Engineering

Year I

Year Model

		Teaching Scheme			Hou	Contact Hours/Week	t eek	Exam Duration	m tion
.oV.2	Subject	Course Title	Subject Area	Credits	L	F	2	Тһеогу	Practical
		Semester-I (Autumn)							
Ž	EQC-501	Dynamics of Soil and Structures	PCC	4	3	0	2	3	0
7	EQC-503	Finite Element Method	PCC	4	3	0	2	3	0
3	EQC-505	Geotechnical Earthquake Engineering	PCC	4	3	0	2	3	0
4.	EQC-507	Earthquake Resistant Design of Foundations	PCC	3	2	-	0	3	0
5.		Program Elective-I	PEC	3/4	(90)	1	r	1	J.
9		Social Science Course	SSC	2		1	i i	-	E.
		Total		20/21					
		Semester-II (Spring)							
-		Program Elective-II	PEC	4	21.	ā.	ă	3	
2		Program Elective-III	PEC	4		Ü	É	1	-
m,		Program Elective-IV	PEC	4	10	X	•	κ	
4.		Science, Technology, and Advanced Research-tools	STAR	3	Œ	(1)	ï	a	æ
s,	EQC-700	Seminar	SEM	2	200	3			ı
		Total		17					



DEPARTMENT OF EARTHQUAKE ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code : XXX M.Tech. (Soil Dynamics)

Department of Earthquake Engineering

Year II

Model : 2

ım tion	Practical		ĸ				ķ	
Exam Duration	Треогу		1	9				
	4		ŧ	1			ĸ	
Contact Hours/Week	⊢		ij	i			*	
Hou	7			ı			ï	
	Credits		3	10	13		14	14
	Subject Area		ISA	THESIS			THESIS	
Teaching Scheme	Course Title	Semester-I (Autumn)	Internship Social Activity	EQC-701A Thesis Stage-I	Total	Semester-II (Spring)	EQC-701B Thesis Stage-II	Total
	Subject Code		EQC-691	EQC-701A			EQC-701B	
	.oV.S		-	2.			T.	

Sı	Summary			
Semester	1	2	3	4
Semester-wise Total Credits	20/21	17	13	14
Total Credits		64/65	99	

15 JAN 2025

M.Tech. (Soil Dynamics)

Program Elective Courses

E	tion	Practical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exam	Duration	Тһеогу	m	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
+	eek	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Contact	Hours/Week	H	-	_	-	_	1	-	-	1	1	1		-	1		-	-	0	1	1	-	1	_	-
	Hou	H	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		Credits	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
		Subject Area	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC
	Teaching Scheme	Course Title	Dynamic Soil Structure Interaction	Ground Improvement Techniques	Machine Foundation	Seismic Slope Stability: Earth Dams & Retaining Walls	Constitutive Modelling in Soil Dynamics	Offshore Geotechnical Engineering	Numerical Methods for Dynamic Systems	Advanced Earthquake Resistant Design of Structures	Earthquake Resistant Design of Masonry Structures	Seismic Evaluation and Retrofitting of Structures	Earthquake Resistant Design of Bridges	Earthquake Resistant Design of Steel Structures	Structural Response Control for Seismic Protection		Reliability Based Design	Earthquake Resistant Design of Special Structures	Experimental Techniques in Earthquake Engineering	Mechanics of Deformable Media	Seismic Microzonation	Earthquake Precursors and Early Warning Systems	Physics of Earthquakes	Geoinformatics	Risk Management and Insurance
34.		Subject Code	EQL-501	EQL-502	EOL-503	EOL-504	EOL-505	EOL-506	EOL-507	EOL-508	EOL-509	EOL-510	EOL-511	EQL-512	EOL-513	EOL-514	EQL-515	EQL-516	EQL-517	EQL-518	EOL-519	EQL-520	EOL-521	EOL-522	EQL-523
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M.Tech. (Soil Dynamics)

Program Elective Courses

	Teaching Scheme			Hon	Contact Hours/Week		Exam Duration
O	Course Title	Subject Area	Credits	7	H	<u>a</u>	Theory
Structural Dynamics			ST.	65	00	ස්	60
Earthquake Resistant Design of Structures	of Structures	PEC	(1)	Ô	6	ଖ	0
Continuum Mechanics of Solids	qs		66	ŝ	25 5 52 5 52 5	<u>©</u>	0
Seismological Modelling and Simulation	Simulation		4	Ĉ,	ő	Ĉ.	3
Seismic Vulnerability and Risk Analysis	sk Analysis		đ	භ	6	ផ្ស	0
Seismic Hazard Assessment			ล์กิ	ŝ	100 S	9	ජ ල



DEPARTMENT OF EARTHQUAKE ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

de XXX M.Tech. (Structural Dynamics)

Department of Earthquake Engineering

XXX M.Tech	. Department of	I	2
Program Code	Department	Year	Model

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	Subject Area		PCC	PCC	PCC	PCC	PEC	SSC			PEC	PEC	PEC	STAR	SEM	
Teaching Scheme	Course Title	Semester-I (Autumn)	Finite Element Method	Structural Dynamics	Earthquake Resistant Design of Structures	Continuum Mechanics of Solids	Program Elective-I	Social Science Course	Total	Semester-II (Spring)	Program Elective-II	Program Elective-III	Program Elective-IV	Science, Technology, and Advanced Research-tools	Seminar	Total
	Subject Code		EQC-503	EQC-511	EOC-513	EOC-515									EQC-700	
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DEPARTMENT OF EARTHQUAKE ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code XXX M.Tech. (Structural Dynamics)
Department of Earthquake Engineering
Year II
Model 2

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Teaching Scheme	Course Title	Semester-I (Autumn)	Internship Social Activity	EQC-701A Thesis Stage-I	Total	Semester-II (Spring)	EQC-701B Thesis Stage-II	Total
	Subject Code		EQC-691	EQC-701A			EQC-701B	
	.oV.2			2.			i	

Su	Summary			
Semester	1	7	60	4
Semester-wise Total Credits	20/21	17	13	14
Total Credits		64/65	65	



M.Tech. (Structural Dynamics)

Program Elective Courses

am ition	Practical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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eek	А	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Contact Hours/Week	Т	1	1	1	1	1	1	1	1	1	1	-	1	_	-	-	_	0	1	-	-		-	-
Hoi	L	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Credits	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Subject Area	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC
Teaching Scheme	Course Title	Dynamic Soil Structure Interaction	Ground Improvement Techniques	Machine Foundation	Seismic Slope Stability: Earth Dams & Retaining Walls	Constitutive Modelling in Soil Dynamics	Offshore Geotechnical Engineering	Numerical Methods for Dynamic Systems	Advanced Earthquake Resistant Design of Structures	Earthquake Resistant Design of Masonry Structures	Seismic Evaluation and Retrofitting of Structures	Earthquake Resistant Design of Bridges	Earthquake Resistant Design of Steel Structures	Structural Response Control for Seismic Protection	Random Vibration	Reliability Based Design	Earthquake Resistant Design of Special Structures	Experimental Techniques in Earthquake Engineering	Mechanics of Deformable Media	Seismic Microzonation	Earthquake Precursors and Early Warning Systems	Physics of Earthquakes	Geoinformatics	Risk Management and Insurance
	Subject Code	EOL-501	EQL-502	EQL-503	EQL-504	EQL-505	EQL-506	EQL-507	EQL-508	EQL-509	EQL-510	EQL-511	EOL-512	EOL-513	EOL-514	EOL-515	EQL-516	EOL-517	EOL-518	EOL-519	EQL-520	EQL-521	EQL-522	EQL-523
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M.Tech. (Structural Dynamics)

Program Elective Courses

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eek	Ь	2	2	0	7	2	0
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Hor	L	3	3	2	3	3	2
	Credits	4	4	3	4	4	3
	Subject Area	PEC	PEC	PEC	PEC	PEC	PEC
Teaching Scheme	Course Title	Dynamics of Soil and Structures	Geotechnical Earthquake Engineering	Earthquake Resistant Design of Foundations	Seismological Modelling and Simulation	Seismic Vulnerability and Risk Analysis	Seismic Hazard Assessment
	Subject Code	EQC-501	EOC-505	EOC-507	EOC-521	EOC-523	29. EOC-525
	.oV.2	24.	25.	26.		28.	29.
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Science, Technology, and Advanced Research-tools Basket

H E		Teaching Scheme Exam Hours/Week Duration	Course Title Subject Area Credits Theory Theory	arformance Scientific Committing
	Subject Code	Teaching Scheme	Course Title	High Derformance Scientific Committing



DEPARTMENT OF EARTHQUAKE ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

XXX M.Tech. (Seismic Vulnerability and Risk Assessment) Department of Earthquake Engineering

Program Code Department Year Model

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Contact Hours/Week	F		0	0	0	-	7	r			10	t	1	1	,	
C Hor	T		3	3	3	2	Į.	390			10	(4)				
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	Subject Area		PCC	PCC	PCC	PCC	PEC	SSC			PEC	PEC	PEC	STAR	SEM	
Teaching Scheme	Course Title	Semester-I (Autumn)	Structural Dynamics	Seismological Modelling and Simulation	Seismic Vulnerability and Risk Analysis	Seismic Hazard Assessment	Program Elective-I	Social Science Course	Total	Semester-II (Spring)	Program Elective-II	Program Elective-III	Program Elective-IV	Science, Technology, and Advanced Research-tools	Seminar	Total
	Subject Code		EOC-511	EQC-521	EQC-523	EOC-525									EQC-700	
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DEPARTMENT OF EARTHQUAKE ENGINEERING INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

XXX M.Tech. (Seismic Vulnerability and Risk Assessment) Department of Earthquake Engineering Program Code Department Year Model

Subject	Teaching Scheme Course Title	bject rea	saits.	Hou L	Contact Hours/Week	eek P	Duration Beory Exam	E E E Isolita
ode	Someeter-I (Antium)		CI				ЯТ	Pra
EOC-691	Internship Social Activity	ISA	3	ě	٠		r	
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			13					
	Semester-II (Spring)							
2-701B	EQC-701B Thesis Stage-II	THESIS	14	1		ı	÷	ï
	Total		14					

Sı	Summary			
Semester	1	2	3	4
Semester-wise Total Credits	20/21	17	13	14
Total Credits		64/65	92	



M.Tech. (Seismic Vulnerability and Risk Assessment)

Program Elective Courses

am fion	Practical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exam Duration	Треогу	3	3	3	3	3	3	3	3	3	3	3	3	3	3	ы	m	3	3	3	3	3	3	3
eek	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Contact Hours/Week	H	-	1	-	1	1	1	1	-	_	1	-		1	_	1	-	0	_	_	-	_	-	-
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	Subject Area	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC	PEC
Teaching Scheme	Course Title	Dynamic Soil Structure Interaction	Ground Improvement Techniques	Machine Foundation	Seismic Slope Stability: Earth Dams & Retaining Walls	Constitutive Modelling in Soil Dynamics	Offshore Geotechnical Engineering	Numerical Methods for Dynamic Systems	Advanced Earthquake Resistant Design of Structures	Earthquake Resistant Design of Masonry Structures	Seismic Evaluation and Retrofitting of Structures	Earthquake Resistant Design of Bridges	Earthquake Resistant Design of Steel Structures	Structural Response Control for Seismic Protection		Reliability Based Design	Earthquake Resistant Design of Special Structures	Experimental Techniques in Earthquake Engineering	Mechanics of Deformable Media	Seismic Microzonation	Earthquake Precursors and Early Warning Systems	Physics of Earthquakes	Geoinformatics	Risk Management and Insurance
	Subject Code	EOL-501	EQL-502	EOL-503	EQL-504	EQL-505	EQL-506	EQL-507	EQL-508	EQL-509	EQL-510	EQL-511	EQL-512	EQL-513	EQL-514	EOL-515	EQL-516	EQL-517	EOL-518	EOL-519	EQL-520	EQL-521	EOL-522	EOL-523
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M.Tech. (Seismic Vulnerability and Risk Assessment)

Program Elective Courses

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24.	EOC-501	Dynamics of Soil and Structures	PEC	4	3	0	2	3	0
25.	EOC-503	Finite Element Method	PEC	4	3	0	7	3	0
26.	EOC-505	Geotechnical Earthquake Engineering	PEC	4	3	0	7	3	0
27.	EOC-507	Earthquake Resistant Design of Foundations	PEC	3	7	1	0	3	0
28.	EOC-513	Earthquake Resistant Design of Structures	PEC	4	3	0	7	co	0
	29. EOC-515	Continuum Mechanics of Solids	PEC	3	7	_	0	က	0

Science, Technology, and Advanced Research-tools Basket

Course Title Code Code Code Contact Contact Contact Exam Hours/Week Duration Code Subject Code Subject Code Subject Code Subject Code Subject Code Subject Subjec	tion	Practical	0
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.oV.S		Subject Code	EOT-502
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Appendix 'F'

Item No. Senate / 103.15
Proposed Guidelines: Penal Provisions for using unfair means during examination

Severity of Offence	Details	Offence					
Level - 1	During the examination, if a student is found verbally communicating with another student inside or outside the examination hall.	If the student continues to talk after the first warning given by the faculty/invigilator in the same examination, the student may be stopped from writing for 15 minutes per offence by taking the answer sheet. If the student repeats it more than three times, then the answer sheet be taken and the student be asked to leave the examination.					
	a. A student is found	Offence - I	Offence - II				
Level - 2	carrying prohibited item(s):* Or found transferring matter from any source	Zero marks to be awarded to the student in the concerned course component examination	If a student is caught carrying prohibited items repeatedly during any of the examination in a semester, then the student be given a course backlog in all the exams in which the student was caught carrying such items.				
	b. Answer Script carried out of the examination room during or after the examination.	Backlog to be awarded in that course.	Semester Backlog i.e. the running semester will be dropped if the student repeats it in the examination of other courses too.				
Level - 3	Impersonation (Identity Mismatched)	 Semester Backlog in the running semester for both students. If the impersonating student is not a student of the institute, then an FIR may be lodged. 	Expulsion from the institute.				

^{*} Prohibited items like chits, electronic gadgets like tablets, mobile phone, smart watch & ear buds etc. (Not applicable to the exams conducted as Computer Based Test, subjective communicated to Dean AA).

^{*} If mobile phone of a student is found in the premises of Lecture Hall Complex, it will be treated as Unfair means offence of Level-2.



As recommended by the IAPC

- Cases not covered above to be dealt by the Standing Committee of Unfair Means.
- The severity of the offence (Level 2 or 3) will be decided by the committee based on the facts available.

Note: If the student repeats the offence beyond the 2nd offence the case would be considered under the offence of immediate next level. The levels are:

- Barring student to write for 15 minutes.
- Asking student to leave the examination room.
- Zero marks awarded in the concerned examination
- · Backlog in the concerned course.
- Backlog in the ongoing semester.
- Expulsion from the institute.

Reporting and Handling of Unfair Means Cases

- 1. Any contravention of the instructions printed on the cover page of the answer book or informed in the examination hall by the invigilators or the use of any unfair means to write the answer will render the student liable for penal provisions.
- 2. In case of unfair means being suspected by the invigilator, the reporting to the Dean of Academic Affairs will be carried out as per form UF-0 and the student will be allowed to complete the examination in the same answer script. Marking may be made in the answer script up to which the student has already written the answers when use of unfair means was reported.
- 3. A Committee appointed by the Director shall enquire into cases of reported use of unfair means during the examination. The student will be given an opportunity to present his/her case before the committee. The committee shall decide the level of the offence (as per the Table) and submit its recommendation to the Director for consideration.



UF-0

UNFAIR MEANS USAGE REPORTING FORM INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

PART-A (To be filled by the invigilator)

Note: A	separate sheet should be used for each student.							
(1)	Examination: MTE / ETE / PRS (strike through whichever is not applicable)							
(2)	Enrolment No. of the student.							
(3)	Name of the student							
(4)	Course Code Course Name							
(5)	DayDateTimeLocation							
(6)	Student is caught under Level:							
	Level I : During the duration of examination, if a student is found verbally communicating							
	with another student inside or outside the examination hall.							
	Level II: a) A student is found carrying prohibited item(s).							
	Level II b) Answer Script carried out of the examination room during or after the							
	examination.							
	Level III : Impersonation (Identity mismatched)							
(7)	Proof attached along with brief description:							

*****	***************************************							

D .								
	(Signature of the Invigilator-1) Name of the invigilator-1							
	(Signature of the Invigilator-2/witness) Name of the invigilator-2/witness							

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As recommended by the IAPC

PART-B (To be filled by the student after the submission of the answer script at the end of the examination)

(1)	Response of the	e student:	

		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	************************************

Date		Time	(Signature of the student
Buttern			Enrolment No.:
			(Signature of the Invigilator

15 JAN 2025

Minutes of the Meeting of the Standing Committee to Review Guidelines for Handling Unfair Means During Examinations

Date: 20th May 2024

Location: Associate Deans of Academic Affairs Office, Main Building

The following members attended the meeting:

Prof. Pradeep Srivastava, ADoAA (Evaluation)

Prof. Maheshanand, Head, Dept. of Mathematics

Prof. Avlokita Agrawal, ADoSW (Wellness) Prof. Rajat Rastogi, Dept. of Civil Engineering

Prof. Himanshu Fulara, Dept. of Physics

- Chairperson

- Member

- Member

- Member

- Member

A committee was constituted vide Office Memorandum No. Acd./5815/Misc-2024 dated March 01, 2024 to review the guidelines w.r.t. handling of Unfair Means during examination (Signed copy of OM attached) (Annexure-IV)

Terms of References:

- i) To study the existing guidelines for handling the Unfair Means during examination vis-à-vis, the practices in the sister IITs and other world-class institutions.
- ii) To propose actionable points so as to discourage/eliminate the tendency/practices of adopting Unfair Means during the examinations by the students.
- iii) To study and report on possible improvements in the existing invigilation system in the theory examinations-both in conventional pen-paper mode and in electronic mode using laptop etc. and practical examinations.
- iv) To propose possible punishment, if necessary, for adopting Unfair Means during examination.
- v) To review the process of handling the cases.

Recommendations of the Committee:

1. Review of Existing Guidelines and Reporting Form:

- The committee reviewed the existing guidelines and the Unfair Means Reporting Form. (Annexure
- Several changes were made to both documents. The revised guidelines and form are attached for reference. (Annexure-II, III)

Study of Existing Guidelines:

The committee examined the current guidelines in comparison with practices at sister IITs and other world-class institutions.

New guidelines were proposed based on this review. (Amexure-II)

2. Proposals to Discourage/Eliminate Unfair Means:

- During the orientation program for new entrants, students may be sensitized about the consequences of using unfair means in any exams. They should be made aware about the items they are required to bring to examinations, the prohibited items, and the potential punishments for using unfair means during examinations.
- A general email (bilingual) may be sent to the students and their parents outlining the examination guidelines and the punishments for being caught using unfair means, just before the examination.

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· A bilingual letter should be sent to the parents of the student who is caught using unfair means, informing them of the punishment given to their ward.

3. Improvements in the Invigilation System:

- · Faculty members are advised not to carry electronic gadgets like laptops, iPads to work in the examination room unless necessary for the examination. If these devices are needed, faculty should inform the Dean of Academic Affairs in advance to ensure smooth entry at the main gate. To this end, a Google form will be circulated well in advance to know the requirements pertaining to each examination in terms of material which need to be allowed or carried to the examination hall.
- Heads of the departments should ensure that every exam of their department is invigilated by at least one faculty member. In the case of larger classes, more than one faculty shall be deployed. In addition to this, as per need, Research Associates (RAs) may be called for help.
- · Identification tags of RAs identified for invigilation in an examination may be sent to the concerned departments in advance. This will avoid the queues and save time. RAs shall collect their identification tags from the department office and shall return them back to the office after the examination is over.

4. Proposed Penal provisions against use of Unfair Means in examination:

Penal provisions and actions are proposed based on the gravity of the offence. (Amexure-II)

Process of Handling Cases:

- Changes are made to the existing Unfair Means Reporting Form in line with the changes being proposed by the committee. (Annexure-III)
- A suggestion was made to establish a counter at each block to immediately report cases to the Academic Affairs Office if so happens.

The meeting concluded with a vote of thanks to the Chair.

Prof. Rajat Rastogi

Department of Civil Engineering

Prof. Avlokita Agrawal ADoSW (Wellness)

Prof. Maheshanand **Department of Mathematics**

> imanshu Fulara Department of Physics

Prof. Pradeep Srivastava

ADoAA (Evaluation)

Existing Guidelines: Punishment for using unfair means during examinations (MTE/ETE)

Appendix 'A'
Item No. Senate/76.7

Proposed Guidelines: Punishment for using unfair means during examinations (MTE/ETE)

Severity of Offence	Details	1 st offence	Z nd offence
Level 1	If a student is found carrying un-authorised material like chits, electronic gadgets like tablets, calculators, mobile phone etc. If a student is found verbally communicating with another student inside or outside the examination room.	Warning to be Issued to the concerned student.	Ponalty of one grade point in the concerned course.
Level 2	A student is found using a mobile phone, chits, books or other unauthorized material. Identical answers in the examination. Answer Script / Question paper carried out of the examination room during/after the examination.*	Zero marks to be awarded to the student in the concerned examination (MTE/ETE).	Semester Backlog i.e. the running semester will be dropped.
tevel 3	Impersonation. Answer Script / Question paper carried out of the examination room during/after the examination.*	Semester Backlog in the running semester. In addition to this, the student will be allowed to register only for 8 credits in the next semester.	Expulsion from the institute.

Cases not covered above to be dealt by the committee.

*Level of the offence (Level 2 or 3) to be douided by the commissee,

Note: On repetitive offence after 2nd offence in levels 1 and 2 the case would be considered under the affence of immediate next level.

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Proposed Guidelines: Penal Provisions for using unfair means during examination

Severity Offence	of	Details	Offence - I	Offence - II			
Level - 1		During the examination, if a student is found verbally communicating with another student inside or outside the examination hall.	If the student continues to ta given by the faculty/inv examination, the student writing for 15 minutes per answer sheet. If the studen three times, then the answer student be asked to leave th	rigilator in the same may be stopped from offence by taking the nt repeats it more than r sheet be taken and the			
	a.	A student is found carrying	Offence - I	Offence - II			
Level - 2		prohibited item(s).* Or found transferring matter from any source	Zero marks to be awarded to the student in the concerned course component examination	If a student is caught carrying prohibited items repeatedly during any of the examination in a semester, then the student be given a course backlog in all the exams in which the student was caught carrying such items.			
	Ъ.	Answer Script/Question	Offence - I	Offence - II			
		Paper carried out of the examination room during or after the examination.	Backlog to be awarded in that course.	Semester Backlog i.e. the running semester will be dropped if the student repeats it in the examination of other courses too.			
Level - 3		Impersonation	Offence - I	Offence - II			
		(Identity Mismatched)	Semester Backlog in the running semester for both students. If the impersonating student is not a student of the institute, then an FIR may be lodged.	Expulsion from the institute.			

^{*} Prohibited items like chits, electronic gadgets like tablets, mobile phone & ear buds etc. (Not applicable to the exams conducted as Computer Based Test, subjective communicated to Dean AA).

• Cases not covered above to be dealt by the Standing Committee of Unfair Means.

• The severity of the offence (Level 2 or 3) will be decided by the committee based on the facts available.

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Note: If the student repeats the offence beyond the 2nd offence the case would be considered under the offence of immediate next level. The levels are:

- · Barring student to write for 15 minutes.
- Asking student to leave the examination room.
- Zero marks awarded in the concerned examination
- Backlog in the concerned course.
- · Backlog in the ongoing semester.
- Expulsion from the institute.

Reporting and Handling of Unfair Means Cases

- 1. Any contravention of the instructions printed on the cover page of the answer book or informed in the examination hall by the invigilators or the use of any unfair means to write the answer will render the student liable for penal provisions.
- 2. In case of unfair means being suspected by the invigilator, the reporting to the Dean of Academic Affairs will be carried out as per form UF-0 and the student will be allowed to complete the examination in the same answer script. Marking may be made in the answer script up to which the student has already written the answers when use of unfair means was reported.
- 3. A Committee appointed by the Director shall enquire into cases of reported use of unfair means during the examination. The student will be given an opportunity to present his/her case before the committee. The committee shall decide the level of the offence (as per the Table) and submit its recommendation to the Director for consideration.

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UNFAIR MEANS USAGE REPORTING FORM INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

PART-A (To be filled by the invigilator)

Note: A	A separate sheet should be used for each student.
(1)	Examination: MTE / ETE / PRS (strike through whichever is not applicable)
(2)	Enrolment No. of the student
(3)	Name of the student.
(4)	Course Code
(5)	DayDateTime
(6)	Student is caught under Level:
	Level I: During the duration of examination, if a student is found verbally communicating
	with another student inside or outside the examination hall.
	Level II: a) A student is found carrying prohibited item(s).
	Level II b) Answer Script/Question Paper carried out of the examination room during or after
	the examination.
	Level III: Impersonation (Identity mismatched)
(7)	Proof attached along with brief description:
• • • • • • • • •	
• • • • • • • • •	
	(Signature of the Invigilator)
Time	Name of the invigilator

history of

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PART-B (To be filled by the student after the submission of the answer script at the end of the examination)

(1)	Response of the	student:	

		*****************	************

Date		Time	(Signature of the student)
			Enrolment No.:
			(Signature of the Invigilator)
Λ			
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15 JAN 2025

Appendix 'G' Item No. Senate / 103.16

To,

The Dean of Academic Affairs Indian Institute of Technology Roorkee, Roorkee, Uttarakhand-247667. 31d Sept 2024,

SUB: Submission of recommendation of Academic Bank of Credits(ABC) Committee – reg.

Ref: Notification No. AAO-Ph.D./Senate/220728 dated July 07, 2023.

Sir,

The IRC, in its 63rd meeting, recommended the proposal for the participation of IIT Roorkee in the Academic Bank of Credits scheme introduced by the Ministry of Education, GoI.

The committee as referred above was constituted to consider the proposal and met on several occasions. The committee deliberated on the proposal in detail, taking into account the views obtained from the Heads of all Departments/Centres/Schools of the institute, as well as the existing information available in the public domain from CFTIs such as IISc, Bangalore.

The committee recommends certain criteria and guidelines for the successful implementation of the Academic Bank of Credits in the institute, which are attached as Annexure-1.

The same is placed for your kind deliberation and consideration.

Prof. Bhanu Kumar Mishra Chairman, ABC Committee

IITR's Academic Bank Credit Scheme

(A) For students desiring credits from IIT Roorkee (All categories)

- Students who can take courses at IITR under Academic Bank Credit Scheme can be from:
 - a. Students from all CFTIs.
 - b. Students from other Institutes in India with latest NIRF ranking up to 50. (As recommended by the IAPC)
 - c. International students from institutes with latest QS ranking up to 500.
 - d. Students from Institutes having MoU with IIT Roorkee for the purpose of academic exchange.
- 2. Student shall apply with such a request through the designated authority in their institute to IITR well before the start of the semester in which the desired course is being offered. Primarily, it shall be by the end of previous semester as courses of next semester are finalised by that time.
- 3. All course types are open except project, seminar, and communication courses or thesis work which require allocation of resources and has logistic issues.
- Courses will be made available based on their availability in a semester and in the same mode in which it is running in the Institute. Option of Self-study will not be available under this category.
- Course Examination will be in Physical mode only or as decidedotherwise by the course coordinator.
- 6. Eligibility to register for a course will be decided by DAPC/CAPC/ScAPC.

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- The number of students registration in a course will be decided by the course coordinator/ DAPC/CAPC/ScAPC with a maximum limit of 10% of maximum class strength at IIT Roorkee.
- 8. Student will be allowed for academic credits transfer with the limits as mentioned below: As recommended by the IAPC a. UG, IDD: up to 20 credits b. M.Sc, PG, PhD: up to 8 credits
- Grading in a course will be as per IIT Roorkee grading system &
 will not be adjusted as per the parent Institute.
- 10. Fee will be charged per credit as Rs. 5000/- plus GST as tuition fee. This will be non-refundable.
- (B) For students of IIT Roorkee desiring Academic Credits from Other Institutions (All categories)
 - Students of IIT Roorkee can take courses at other institutions to earn Academic Credits. The institutions shall fall under any category as follows:
 - a. IITs, IIMs, IISERs, IISc, TIFR, RRI, NCBS, JNCASR, ISI, Chennai Mathematic Institute
 - b. Any other institute with the permission of DRC/CRC/ScRC or DAPC/CAPC/ScAPC as the case may be
 - c. International institutes with latest QS ranking up to 500
 - Students shall apply through concerned DRC/CRC/ScRC or DAPC/CAPC/ScAPC as the case may be
 - 3. Students will not be allowed to take core courses (PCC) from other institute to earn the academic credits
 - 4. Before allowing for academic credits, credit mapping will be decided by the AAO of the institute.
 - 5. Students will be allowed for academic credits transfer with the limits as mentioned below:
 - a. UG, IDD: up to 20 credits
 - b. M.Sc, PG, PhD: up to 8 credits

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In the case of Research students, the students can earn additional 4 credits after giving proper justification and obtaining approval of the DRC/CRC/ScRC

(C) Students of IIT Roorkee taking withdrawal and requesting to continue

The break in the studies can be allowed for a total duration of 3 years, irrespective of the programme. Such students requesting for continuation of the degree programme will be allowed to retain the credits earned at the time of taking a break.

(D) Students admitted to IIT Roorkee in PhD programme

Students who are admitted under PhD programme in IIT Roorkee, and who have earned academic credits in the last attended institution which have not been used for the award of a degree, will be allowed for transfer of academic credits to the extent recommended by DRC/CRC/ScRC.

These students shall be from:

- a. IITs, IIMs, IISERs, IISc, TIFR, RRI, NCBS, JNCASR, ISI, Chennai Mathematic Institute
- Any other institute with the permission of DRC/CRC/ScRC or DAPC/CAPC/ScAPC as the case may be
- c. International institutes with latest QS ranking up to 500

The transfer will be allowed if the student is admitted within 3 years of the completion of the course work.

Prof. Rajat Rastogi Member, ABC Committee

Prof. Kanhaiya Lal Yadav Member, ABC Committee Prof.Pradeep Srivastava ADOAA (Evaluation) Member, ABC Committee

Bhanu Kumar Mishra Chairman, ABC Committee

1 5 JAN 2025

भारतीय प्रौद्योगिकी संस्थान रूड्की

Serial No. 250000

जैवअभियांत्रिकी में प्रौद्योगिकी स्नातक अभिषद् की अनुशंसा पर जैवविज्ञान एवं

10 को, जिन्होंने इस उपाधि की अवाप्ति हेतु विनियम विहित अपेक्षाओं को सन् 2024 में सफलतापूर्वक पूरा कर लिया की उपाधि -

मुद्रा अंकित दिनांक सितम्बर ०६, २०२५, संस्थान की एतद्द्वारा प्रदान करता है। में आज, स्डकी भारतीय गणराज्य के अन्तर्गत

दी गई।

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Indian Institute of Technology Roorkee

on the recommendation of the Senate hereby confers the degree of

Bachelor of Technology in Biosciences and Bioengineering

nodn

Name

who has successfully completed in the year 2024 the requirements prescribed under the regulations for the award of this degree.

under the seal of the Institute at Roorkee in the Republic of India.

Given this day, September 06, 2025,

अध्यक्ष, अभिषद् एवं निदेशक

Chairman, Senate & Director

कुलसचिव Registrar



Serial No. 250000

भारतीय प्रौद्योगिकी संस्थान रूड्की

अभिषद् की अनुशंसा पर आर. एफ. और माइक्रोवेव अभियांत्रिकी में विशेषज्ञता के साथ इलेक्ट्रॉनिकी एवं संचार अभियांत्रिकी विभाग से प्रौद्योगिकी निष्णात

नाम

की उपाधि

10 भारतीय गणराज्य के अन्तर्गत रूड्की में आज, दिनांक जुलाई 27, 2025, संस्थान की मुद्रा अंकित यह उपाधि दी गई। को, जिन्होंने इस उपाधि की अवाप्ति हेतु विनियम विहित अपेक्षाओं को सन् 2025 में सफलतापूर्वक पूरा कर लिया एतद्द्वारा प्रदान करता है।

Indian Institute of Technology Roorkee

on the recommendation of the Senate hereby confers the degree of

from the Department of Electronics and Communication Engineering Master of Technology in R. F. & Microwave Engineering

nbon

Name

who has successfully completed in the year 2025 the requirements prescribed under the regulations for the award of this degree.

Given this day, July 27, 2025,

under the seal of the Institute at Roorkee in the Republic of India.

अध्यक्ष, अभिषद् एवं निदेशक

Chairman, Senate & Director

कुलसीचव Registrar



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE Item No. Senate / 103.23

	For All Programs (Other than MBA)		
S IV.	Details	Date	Day
1	Admission cum Academic Registration for New Ph.D. Students	13.01.2025	Monday
2	Academic registration of all existing students for Spring Semester 2024-25	13.01.2025 -14.01.2025	Monday – Tuesday
3	Commencement of classes for Spring Semester 2024-25	15.01.2025	Wednesday
4	Re-examination and Second examination (for Autumn Semester 2024-25)	15.01.2025 -17.01.2025	Wednesday – Friday
5	Last date for sending the grades of Re-examination and second examination for Autumn Semester 2024-25	24.01.2025	Friday
6	Last date for Academic Registration with late fine	27.01.2025	Monday
7	Last date for adding/changing courses for all programs	27.01.2025	Monday
8	Last date for submission of mandatory documents for newly admitted Ph.D. students	14.02.2025	Friday
9	National Science Day	28.02.2025	Friday
10	Mid Term Examinations	07.03.2025 -12.03.2025	Friday - Wednesday
11	Mid Term Break	13.03.2025 -16.03.2025	Thursday - Sunday
12	Submission of the feedback/response form - I on the online portal	17.03.2025 -20.03.2025	Monday - Thursday
13	Last date of informing the students about performance in MTE and internal assessment	19.03.2025	Wednesday
14	Cognizance-2025 (including Institute Research Day)	20.03.2025 -23.03.2025	Thursday - Sunday
15	Last date for withdrawal of courses	28.04.2025	Monday
16	Submission of the feedback/response form - II on the online portal	28.04.2025 -02.05.2025	Monday - Friday
17	Last date of teaching	02.05.2025	Friday
18	End Term Examinations (excluding Sunday)	05.05.2025 -14.05.2025	Monday - Wednesday
19	Last date of showing End Term Examinations answer scripts and electronic communication of grades to students	20.05.2025	Tuesday
20	Summer vacation for UG students (except IDD final Year)	20.05.2025 -14.07.2025	Tuesday - Monday
21	Last date for students to apply for grade revision, if any	21.05.2025	Wednesday
22	Last date for the evaluation of Project/Thesis/Seminar for all programs	26.05.2025	Monday
23	Last date for sending final grades to AAO	27.05.2025	Tuesday
24	Admission cum Academic Registration for new Ph.D. and Masters' students (including new M. Des. students)	15.07.2025	Tuesday
25	Academic Registration for existing students	15.07.2025 -16.07.2025	Tuesday - Wednesday
26	Commencement of Classes (except UG I year)	17.07.2025	Thursday
27	Re-examination and second examination (for Spring Semester 2024-25)	17.07.2025 -19.07.2025	Thursday - Saturday
28	Academic Registration for new UG students *	25.07.2025	Friday
29	Commencement of Classes for UG I year *	28.07.2025	Monday

^{*} Tentative schedule



Teaching days for Spring Semester 2024-25

All Programs (Other than MBA)

											Mo	nths									FD	å s
Days	J	anua	ry "		Feb	ruary		March				April			Мау			Less forMTE/ETE/IFD /Convocation/Thomso	Total Teaching day:			
Mon	9	20	27	3	10	17	24	3	10	17	24	-		7	14	21	28		5	981	2	13+1*=14
Tue	-	21	28	4	11	18	25	4	11	18	25		1	8	15	22	29		6	13	3	14
Wed	15	22	29	5	12	19	8	5	12	19	26		2	9	16	23	30		7	14	3	14
Thu	16	23	30	6	13	20	27	6) ist	20	27		3	2	17	24		1	8		3	13+1*=14
Fri	17	24	31	7	14	21	28	7	-	21	28		4	11	-	25		2	9		3	12+2*=14
Sat						22		8		22	29		5			26			10			
Total days		13			2	20				13					22				2			70

*Time-Table Rescheduling (for all the classes)

Event - Non-Teaching day

Examinations

February 22, 2025	Saturday	Mondays' Time Table
March 29, 2025	Saturday	Fridays' Time Table
April 5, 2025	Saturday	Thursdays' Time Table
April 26, 2025	Saturday	Fridays' Time Table

Feedback/Response Form - I	March 17 - 20, 2025
Mid Term Examination	March 07 - 12, 2025
Mid Term Break	March 13 - 16, 2025
Cognizance-2025 (including Institute Research Day)	March 20 - 23, 2025
Feedback/Response Form - II	April 28 – May 02, 2025
Last Date of Teaching	May 02, 2025
End Term Examination	May 05 – 14, 2025

List of Holidays

Republic Day	26.01.2025	Sunday
Maha Shivratri	26.02.2025	Wednesday
Holi	14.03.2025	Friday
Idu'l Fitr*	31.03.2025	Monday
Mahavir Jayanti	10.04.2025	Thursday
Good Friday	18.04.2025	Friday
Buddha Purnima	12.05.2025	Monday
Idu'l Zuha (Bakrid)*	07.06.2025	Saturday
Muharram*	06.07.2025	Sunday

^{*}Subject to change in the visibility of the moon 66-

