

भारतीय प्रौद्योगिकी संस्थान रुड़की  
रुड़की – 247 667 (भारत)

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**  
**ROORKEE - 247 667 (INDIA)**



सीनेट की नब्बेवीं बैठक हेतु कार्यसूची  
**AGENDA FOR THE 90<sup>th</sup> MEETING**  
**OF THE SENATE**

बैठक सं०	:	नब्बेवी
<b>MEETING NO.</b>	:	<b>90<sup>th</sup></b>
स्थान	:	सीनेट हॉल, भा० प्रौ० सं० रुड़की
<b>VENUE</b>	:	<b>Senate Hall, IIT Roorkee</b>
दिनांक	:	16 मार्च 2022
<b>DATE</b>	:	<b>16<sup>th</sup> March 2022</b>
समय	:	04.00 बजे अपरान्ह
<b>TIME</b>	:	<b>04.00 P.M.</b>

भारतीय प्रौद्योगिकी संस्थान रुड़की  
**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

रुड़की 247 667  
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कार्यसूची/AGENDA

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90.1	सीनेट की दिनांक 09.12.2021 को आयोजित हुई 89वीं बैठक के कार्यवृत्त की पुष्टि करना। To confirm the minutes of the 89 <sup>th</sup> meeting of the Senate held on 09.12.2021.	1
90.2	सीनेट की दिनांक 09.12.2021 को आयोजित हुई 89वीं बैठक में लिए गए निर्णयों के क्रियान्वयन हेतु की गई कार्यवाही को रिपोर्ट करना। To report on the actions taken to implement the decisions of the Senate taken in its 89 <sup>th</sup> meeting held on 09.12.2021.	2-6
90.3	बी.टेक/बी.आर्क/बीएस-एमएस/आईएमटी कार्यक्रमों के पाठ्यक्रम संशोधन के प्रस्ताव पर विचार करना। To consider the proposal of curriculum revision of B.Tech./B.Arch./ BS-MS/IMT programs.	7-16
90.4	शैक्षिक कार्यक्रमों के व्यापक "निकास नीति" का प्रस्ताव तैयार करने के लिए गठित समिति की रिपोर्ट पर विचार करना। To consider the report of the committee constituted to create a proposal for a comprehensive "Exit Policy" of the academic programs.	17-22

90.5	<p>वसंत 2021-22 से सभी छात्रों के लिए 75% उपस्थिति आवश्यकता को लागू करने के प्रस्ताव पर विचार करना।(यूजी- वसंत के प्रथम वर्ष को छोड़कर)</p> <p>To consider the proposal to implement 75% attendance requirement w.e.f. from Spring 2021-22 for all students (excluding I year of UG-Spring).</p>	23-25
90.6	<p>रसायन विज्ञान द्वारा प्रस्तावित एमएससी रसायन विज्ञान की संशोधित संरचना पर विचार करना।</p> <p>To consider the revised structure of M.Sc. Chemistry proposed by the Department of Chemistry.</p>	26
90.7	<p>विद्युत अभियांत्रिकी विभाग के निम्नलिखित प्रस्तावों पर विचार करना:</p> <p>(i) 'इलेक्ट्रिक वाहन प्रौद्योगिकी' पर एम.टेक कार्यक्रम शुरू करने के लिए</p> <p>(ii) एम.टेक की संरचना को संशोधित करने के लिए (सिस्टम और नियंत्रण)</p> <p>To consider the following proposals of the Department of Electrical Engineering:</p> <p>(i) To introduce a M.Tech. programme on 'Electric Vehicle Technology'</p> <p>(ii) To revise the structure of M.Tech. (Systems and Control)</p>	27-34
90.8	<p>सुश्री सौम्या जैन (एन.सं.19121032), बी.टेक (पॉलिमर साइंस एण्ड इंजीनियरिंग) वसंत सेमेस्टर (2019-2020) की ग्रेड शीट पर पुनःपरीक्षा के लिए चिह्नित(*) को हटाने के अनुरोध पर विचार करना।</p> <p>To consider request of Ms. Somya Jain (En.No. 19121032), B.Tech. (Polymer Science &amp; Engg.) to remove the (*) marked for re-examination on the grade sheets of Spring Semester (2019-20).</p>	35
90.9	<p>शैक्षणिक सत्र 2022-23 से पॉलिमर और प्रोसेस इंजीनियरिंग विभाग के पॉलिमर विज्ञान और इंजीनियरिंग कार्यक्रम के एम.टेक में प्रवेश के लिए अनुशासन पात्रता को संशोधित करने के प्रस्ताव पर विचार करना।</p> <p>To consider a proposal to revise the discipline eligibility for admission into the M.Tech. Polymer Science and Engineering program of the Department of Polymer and Process Engineering and to increase the intake w.e.f. the Academic Session 2022-23.</p>	36
90.10	<p>जानपद अभियान्त्रिकी विभाग के निम्नलिखित प्रस्तावों पर विचार करना:</p> <p>1. शैक्षणिक सत्र 2022-23 से मौजूदा एम.टेक कार्यक्रम का नाम जियोमैटिक्स इंजीनियरिंग से जियोस्पेटिअल इंजीनियरिंग बदलने के लिए।</p> <p>2. जियोमेटिक्स इंजीनियरिंग मेन-गेट डिसिपलीन के तहत एम.टेक के लिए योग्यता के रूप में जियोमैटिक्स इंजीनियरिंग (जीई) को शामिल करना।</p> <p>To consider the following proposals of the Department of Civil Engineering:</p>	37

	<ol style="list-style-type: none"> <li>1. To rename the existing M.Tech. program on 'Geomatics Engineering' as "Geospatial Engineering" w.e.f. the Academic Session 2022-23. (Appendix-A)</li> <li>2. To include Geomatics Engineering (GE) as eligibility for M.Tech. Geomatics Engg. under the Main GATE Discipline.</li> </ol>	
90.11	<p>एम.टेक के लिए जल संसाधन विकास एवम् प्रबंधन विभाग के निम्नलिखित प्रस्तावों पर विचार करना। शैक्षणिक सत्र 2022-23 से पेयजल एवम् स्वच्छता कार्यक्रम</p> <ol style="list-style-type: none"> <li>1. संरचना</li> <li>2. सीट मैट्रिक्स और न्यूनतम पात्रता योग्यता (एमईक्यू)</li> </ol> <p>To consider the following proposals of Department of Water Resources Development and Management for M.Tech. Drinking water and Sanitation programme from Academic Session 2022-23:</p> <ol style="list-style-type: none"> <li>1. Structure</li> <li>2. Seat matrix and Minimum Eligibility Qualifications (MEQ)</li> </ol>	38-42
90.12	<p>शैक्षणिक वर्ष 2022-23 में प्रवेश के लिए निम्नलिखित कार्यक्रमों के लिए प्रस्तावित सीट मैट्रिसेस पर विचार करना:</p> <ol style="list-style-type: none"> <li>1. एम.टेक./एम.आर्क./एमयूआरपी कार्यक्रम</li> <li>2. एमएससी जैम 2022 के माध्यम से कार्यक्रम</li> </ol> <p>To consider the proposed seat matrices for the following programmes for admissions in the Academic Year 2022-2023:</p> <ol style="list-style-type: none"> <li>1. M.Tech./M.Arch./MURP programmes</li> <li>2. M.Sc. programme through JAM 2022</li> </ol>	43-45
90.13	<p>पीएचडी कार्यक्रम में एक नई फेलोशिप "IITR@175 Fellowship" शुरू करने के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal to start a new fellowship in Ph. D. programme – "IITR@175 Fellowship".</p>	46-47
90.14	<p>जल संसाधन विकास एवम् प्रबंधन विभाग से पीएचडी प्रोग्राम में प्रवेश के लिए न्यूनतम शैक्षिक योग्यता (एमईक्यू) में संशोधन पर विचार करना।</p> <p>To consider revision in Minimum Educational Qualification (MEQ) for admission into the Ph.D. programme in Water Resources Development &amp; Management Department.</p>	48
90.15	<p>पीएच.डी छात्रों को आवश्यक प्रकाशनों के अभाव में प्रौद्योगिकी व्यावसायीकरण/पेटेंट प्रदान/स्टार्ट-अप पीएचडी थिसिस जमा करने की अनुमति देने के प्रस्ताव पर विचार करना करना। ( मद संख्या: 54.2.2, 54वां आईआरसी दिनांक: 02.03.3022)</p>	49-51

	To consider a proposal to allow Ph.D. students to submit Ph.D. thesis on the basis of Technology Commercialisation/ Patent granted/ Founding of Start-up in absence of required publications. (Item No.: 54.2.2, 54 <sup>th</sup> IRC dt: 02.03.2022)	
90.16	<p>पूर्व पीएचडी छात्रों को उनके शैक्षणिक पंजीकरण की बहाली के लिए दया अपील पर विचार करना।</p> <p>To consider the mercy appeal of the ex-Ph. D. Students for reinstatement of their academic registration.</p>	52-53
90.17	<p>अनिवार्य दस्तावेज जमा न करने के कारण निम्नलिखित पीएचडी छात्रों के अनंतिम शैक्षणिक पंजीकरण पर विचार करना।</p> <p>अ. श्री सुमन सौरव मोहंती (सं.21916073), पीएचडी छात्र मानविकी और सामाजिक विज्ञान विभाग।</p> <p>ब. श्री लक्ष्मण सिंह खंगारोट (सं.21911018), पीएचडी छात्र, इलेक्ट्रॉनिक्स और संचार इंजीनियरिंग विभाग</p> <p>To consider the provisional academic registrations of the following Ph. D. students, due to non-submission of mandatory documents:</p> <p>(a) Mr. Suman Sourav Mohanty (En.No.: 21916073), Ph. D. student, Deptt. of Humanities and Social Sciences.</p> <p>(b) Mr. Laxman Singh Khangarot (En.No.: 21911018), Ph. D. student, Deptt. of Electronics and Communication Engg.</p>	54-60
90.18	<p>ऑनलाइन एम.टेक (माइक्रोइलेक्ट्रॉनिक्स और वीएलएसआई) काम करने वाले उद्योग पेशेवरों के लिए कार्यक्रम की प्रगति और स्थिति की रिपोर्ट करना</p> <p>To report the progress and status of online M.Tech. (Microelectronics and VLSI) program for working industry professionals.</p>	61
90.19	<p>अध्यक्ष, सीनेट द्वारा दिए गए अनुमोदनों की रिपोर्ट करने</p> <p>To report the approvals accorded by the Chairman, Senate</p>	62-65
अन्य मुद्दे अध्यक्ष की अनुमति से / Under any other item with the permission of the Chair.		

**Item No. 90.1: To confirm the minutes of the 89<sup>th</sup> Senate meeting held on 09.12.2021.**

The minutes of the 89<sup>th</sup> Senate meeting held on 09.12.2021 were circulated to the members vide e-mail dated 27.12.2021. No comments have been received.

The Senate may consider and confirm the said minutes.

**Item No. 90.2: To report on the actions taken to implement the decisions of the Senate taken in its 89<sup>th</sup> meeting held on 09.12.2021.**

<b>Item No.</b>	<b>Reference to the Senate minutes</b>	<b>Extracts of the Minutes</b>	<b>Status of action taken</b>
89.3	To consider the proposal of conducting the classes in offline mode.	<p>The Senate considered and decided that the classes will continue with on-line mode of teaching until further review.</p> <p>Further, wherever possible, the faculty members are encouraged to adopt hybrid mode of teaching in which students in the campus can join physically while others can join online.</p>	Notified
89.4	<p>To consider the common structure for the BS-MS programmes and II year onwards curriculum as given below:</p> <ol style="list-style-type: none"> <li>1. Common structure for BS-MS Programmes</li> <li>2. (i) BS-MS (Mathematics and Computing)</li> <li>(ii) BS-MS (Chemical Sciences)</li> <li>(iii) BS-MS (Physics)</li> </ol>	<p>The Senate considered and approved a common framework for BS-MS programmes.</p> <p>The Senate also approved the following curricula:</p> <ol style="list-style-type: none"> <li>(a) BS-MS (Mathematics and Computing) and BS-MS (Chemical Sciences) – second year onwards.</li> <li>(b) BS-MS (Physics) – second semester onwards</li> </ol>	Notified

89.5	To consider the proposal of Department of Hydro and Renewable Energy to rename the existing M.Tech. program on 'Alternate Hydro Energy System' as "Renewable and Hydro Energy" and to revise its structure.	The Senate approved the proposal.	Notified
89.6	To consider the proposal of credit transfer for Master students from partner institutes similar to UG regulation.	<p>The Senate approved the guidelines for credit transfer of Masters students from partner institutions. The Senate further decided that the points at S. Nos. (7) &amp; (8) be deleted from the corresponding existing provisions of credit transfer for UG students [Clause 35, UG Regulation].</p> <p>The new guidelines for credit transfer of Undergraduate and Masters students are given in appendix.</p>	Notified
89.7	To consider the proposal of Department of Design to revise the structures of M. Des. (Industrial Design) and MIM (Masters in Innovation Management) programs.	The Senate considered the proposal and approved the revised structures.	Notified
89.8	To consider the proposal to create second list in the admission to Ph. D. programme at the time of selection.	The Senate considered the proposal and decided to create category-wise Merit Lists of all qualified candidates, for each specialization, in a Department/Centre/School for admission to the Ph.D. programme.	Decision will be implemented and suitably be incorporated into the Information Brochure.
89.9	To consider the Minimum Educational Qualification (MEQ) for	The Senate considered the proposal and suggested IRC to reconsider the MEQ and it	Placed as item no.90.11



	admission in Ph. D. programme in Water Resources Development and Management Department.	be subsequently placed before the Senate.	
89.11	To consider the proposal of SAKUNTALA (Scheme for Aspirants of Knowledge Under Talent Advancement) Fellowship, a special scheme for female candidates for admission in Ph. D. programme at IIT Roorkee.	<p>The Senate considered and approved the proposal of <b>SAKUNTALA</b> Fellowship, with the following changes in the criteria:</p> <ol style="list-style-type: none"> <li>1. <b>MEQ:</b> Any female candidate having B.Tech./B.E./B.Arch./B.Des. degree from CFTIs with CGPA <math>\geq 8.5</math> in the 10-point scale will be eligible for admission to the Ph.D. programme in the relevant disciplines. The requirement of GATE/CEED/ National Level examination will be waived off for such candidates.</li> <li>2. <b>Selection:</b> The candidates will be selected through interview.</li> <li>3. <b>Seats:</b> Seats in the above scheme will be supernumerary.</li> <li>4. <b>Fellowship:</b> At par with the Institute Assistantship.</li> </ol>	Notified
89.12	To consider the revised report of the committee constituted for Switchover Programme from M.Sc. to Ph.D. for all the concerned Departments across the Institute.	The Senate considered and approved the proposal.	Notified
89.13	To consider the proposal to offer an Open Elective Course to interested	The Senate approved the recommendation of the IAPC.	Notified

	Masters and Ph.D. students as an AUDIT Course.		
89.14	To consider the proposal regarding establishment of a virtual academic centre namely "Centre for Photonics and Quantum Communication Technology" (CPQCT).	The Senate recommended the proposal for the establishment of an academic centre namely 'Centre for Photonics and Quantum Communication Technology" (CPQCT) to the Board of Governors for approval. The Senate further recommended that the Centre may function in virtual mode, to begin with.	Recommendations were placed before the 64 <sup>nd</sup> meeting of the Board and the Board approved the proposal.
89.15	<p>To consider the following proposals of Department of Applied Science and Engineering:</p> <ol style="list-style-type: none"> <li>1. To rename the Department of Applied Science and Engineering as Department of Applied Mathematics and Scientific Computing.</li> <li>2. To introduce a M.Tech. Program in 'Applied Mathematics and Scientific Computing' along with its course structure and admission procedure.</li> </ol>	<p>The Senate considered and approved the recommendation of the IAPC to rename the Department as Department of Applied Mathematics and Scientific Computing.</p> <p>Further, the Senate approved the starting of an M. Tech. programme in Applied Mathematics and Scientific Computing. However, its course structure and admission procedure be reconsidered by IAPC. The revised course structure and admission procedure be placed before the Senate.</p>	<p>a. Recommendations were placed before the 64<sup>nd</sup> meeting of the Board. The Board approved the proposal.</p> <p>b. To be Notified</p>
89.16	the revised structure of M.Sc. Mathematics to be implemented from	The Senate approved the revised structure of M.Sc. Mathematics to be	Notified

	session 2022-23.	implemented from session 2022-23.	
89.17	To consider the revision in the eligibility criteria for admission to MIM programme of the Department of Design.	The Senate considered and approved the revised eligibility criteria for admission to the MIM programme of the Department of Design.	Notified
89.18	To consider the proposal of Department of Water Resource Development and Management to introduce M.Tech. programme on “Drinking Water and Sanitation” along with its proposed structure and admission process.	The Senate approved the proposal to introduce an M.Tech. programme on ‘Drinking Water and Sanitation’.  However, the Senate suggested that the curriculum of the programme be reconsidered by IAPC. The revised curriculum be placed before the Senate.	Notified
89.19	To consider the revised seat matrix for UG programs in the academic year 2022-2023.	The Senate approved the UG seat matrix for the academic year 2022-2023:	Informed to ADoAA (Admission).
89.21	To consider the proposal of rewording the Centre of Nanotechnology as Centre for Nanotechnology.	The Senate recommended the proposal to the Board of Governors for approval.	Recommendations were placed before the 64 <sup>nd</sup> meeting of the Board. The Board approved the proposal.
89.10 & 89.20 were only the reporting item.			

**Item No. 90.3: To consider the proposal of curriculum revision of B.Tech./B.Arch./ BS-MS/IMT programs.**

The current UG Curriculum has been implemented w.e.f. the academic session 2013-2014. The IAPC, in its 71<sup>st</sup> meeting held on June 27, 2019, decided to review the curriculum to align it with the recent developments and present requirements.

In order to formulate a revised UG curriculum, a 16-member undergraduate curriculum revision committee (UCRC) was constituted in February, 2020 under the Chairmanship of DoAA. The committee had extensive deliberations on it. In the process, inputs from the student General Secretary, Academics-UG, students' representative for Science and Engineering streams, Prof. In-Charge, Placement and Internship, Prof. In-Charge of NCC & NSS and Dean of Students' Welfare were also considered.

A draft curriculum structure was shared with the departments/ centres/ school; the inputs were considered by the Committee in its last meeting held on February 17, 2022.

It is stated that the major considerations of the UCRC while developing the proposal for revision of the curriculum were:

- (a) Advancements in Science and Technology
- (b) Project-Based Learning
- (c) Exiting a Program and Employment / Self-employment
- (d) Social Connect.

The IAPC, in its 117<sup>th</sup> meeting held on 23.02.2022, considered the final proposal of the Committee and recommended it with modifications. Modified proposal is placed at **Appendix-A**.

The above is submitted for the consideration and approval of the Senate.

## UG CURRICULUM REVISION – 2022

### Background, Concept and Proposal



Dean of Academic Affairs  
Indian Institute of Technology Roorkee  
Roorkee – 247667, India  
February 23, 2022

## 1. Background

Revision of academic curriculum periodically is a requirement for an educational institution to keep updated with the changing world. The current curriculum of Indian Institute of Technology Roorkee (IIT Roorkee) was reviewed and implemented in the year 2013. Since then, there have been significant developments in science and technology, learning technologies along with changes in academic, research and employment sectors. The announcement of the 'National Education Policy 2020' (NEP-2020) also provided educational institutes some impetus to relook at their curriculum framework.

Considering the need and in compliance to the decision of 71<sup>st</sup> meeting of IAPC, the Chairman, Senate approved a committee to review the existing B.Tech./B.Arch./IDD/IMS/IMT curriculum. The undergraduate curriculum revision committee (UCRC), notified on 11<sup>th</sup> February 2020, is as follows:

- |  |                            |
|--|----------------------------|
| 1) Prof. Apurbba Kumar Sharma, Dean of Academic Affairs      | - Chairperson (Ex-officio) |
| 2) Prof. Ram Sateesh Pasupuleti, Architecture & Planning     | - Member                   |
| 3) Prof. Naveen Kumar Navani, Biosciences and Bioengineering | - Member                   |
| 4) Prof. P.K. Jha, Chemical Engg.                            | - Member                   |
| 5) Prof. N.K. Samadhiya, Civil Engg.                         | - Member                   |
| 6) Prof. Manoj Misra, Computer Science & Engg.               | - Member                   |
| 7) Prof. G.N. Pillai, Electrical Engg.                       | - Member                   |
| 8) Prof. Anand Bulusu, Electronics & Communication Engg.     | - Member                   |
| 9) Prof. Rajat Agrawal, Management Studies                   | - Member                   |
| 10) Prof. D.K. Dwivedi, Mechanical & Industrial Engg.        | - Member                   |
| 11) Prof. B.S.S. Daniel, Metallurgical & Materials Engg.     | - Member                   |
| 12) Prof. Uday Singh, Mathematics                            | - Member                   |
| 13) Prof. Kalyan K. Sadhu, Chemistry                         | - Member                   |
| 14) Prof. Vipul Rastogi, Physics                             | - Member                   |
| 15) Prof. Kamal, Earth Sciences                              | - Member                   |
| 16) Prof. Binod Mishra, Humanities & Social Sciences         | - Member                   |

There were interactions with the Committee and the full UCRC met on 5<sup>th</sup> – 6<sup>th</sup> July, 2021, 4<sup>th</sup> August, 2021 and 17<sup>th</sup> February, 2022. The Committee also considered the views of students, alumni and faculties during the meetings as well as via discussions at the department/centre/school levels. The concepts and visions that were identified in the deliberations were further discussed in the Institute Academic Program Committee (IAPC) meeting held on 23<sup>rd</sup> February, 2022. The recommendations of IAPC is proposed as below.

## 2. Concept

The following major philosophies/drivers are considered as the basis for the revision of the curriculum:

- Advancements in Science and Technology
- Project-Based Learning
- Exiting a Program and Employment / Self-employment
- Social Connect.

A basic structure of the curriculum was developed by the UCRC based on the deliberations. The proposed structure was deliberated in the 117<sup>th</sup> meeting of the IAPC; the recommended structure is presented in the subsequent sections.

## 3. The Basic Structure

**Table 1. Structure of 4-Year B. Tech. Programs**

Main Curriculum components	Type of Courses	Flexible Range	Credits to be earned	Remarks
<b>Institute Core Courses (ICC)</b>	Humanities and Social Science Courses (HSSC)	5 - 8		* (i) Communication Skills-02 credits mandatory in the I-Yr, 1 <sup>st</sup> semester. (ii) 1-2 courses of 3-Cr each from the basket of courses offered by the Department of Humanities and Social Sciences. (Department to suggest the number of courses and students to opt the required number of courses from the above basket of HSS courses) (iii) The HSS Dept. has volunteered to offer one more basket of advanced courses for three additional credits (3-Cr).
	Basic Science Courses (BSC)	8** -20		**Mathematics courses • In addition to CY, MA and PH departments, ES and BSBE will be also offering courses under this category.
	Engineering Science Courses (ESC)	8 - 20		• For interdisciplinary exposure
	Environment and Sustainability Science Courses (ESSC)	3	<b>36 - 44</b>	• <b>To be taken from other engineering departments</b> • <b>To create awareness</b> among students on environmental issues and <b>to prepare them to solve the issues related to their discipline.</b>

				<ul style="list-style-type: none"><li>A group of departments to design one course on <b>environmental and sustainability aspects related to their discipline</b>.</li><li>This course will be offered by such departments (<b>jointly or rotation basis</b>) for the students of their disciplines. One department/centre/school in a group may continue to offer the course to all others in the group as per the convenience/requirement.</li></ul> <p>The groups of departments are</p> <p>(i) CE, AR, ES, HSS</p> <p>(ii) EE, ECE, CSE, MFS, PH, MA</p> <p>(iii) CY, CH, BSBE</p> <p>(iv) ME, MT</p> <ul style="list-style-type: none"><li>Fundamental course on management to be taught by DOMS</li><li>Details provided in Table 3</li></ul>
Program Core Courses (PCC)	Management Courses (MC)	3	104–116	<ul style="list-style-type: none"><li>To be decided by Deptt./ Centre/ School in consultation with all stakeholders</li></ul>
	Tinkering and Mentoring (TM)	4		
	Class Contact Core Courses	52-68		
	Engineering Analysis and design	0-4		
	Industry Oriented Problem Solving/Lab-based Project/ Practical Problem/Case Study/ Seminar/Practical Training & Internship	0-4		
	Technical Communication	3	<ul style="list-style-type: none"><li>HSS Dept. has volunteered to offer the course across the Institute</li><li>Individual departments/centres/school may also design and offer the course</li></ul>	
	B. Tech. Project	8-12	<ul style="list-style-type: none"><li><b>Optional</b> (students may opt – BTP/PEC).</li><li>Department may decide the credits, eligibility (if any).</li><li>Students to give their option for BTP/PEC by the end of III Yr-2<sup>nd</sup> Semester</li><li>Switching between BTP and PEC is not allowed.</li></ul>	
Program Elective Courses (PEC)	Program Elective Courses	24–36	<ul style="list-style-type: none"><li>Deptt./ Centre/ School are expected to offer new courses in the areas of new developments</li></ul>	



	Talent Enhancing Basket (TEB) (Practical based)	6-8	<ul style="list-style-type: none"> <li>• Mandatory</li> <li>• Departments/Centres/School will create basket(s) of practical-based/hands-on courses <b>on specific themes</b> (for example – Analytical techniques, Coding, Creative writing, Design, Microscopy, Welding, etc.) pertaining to their specializations to enhance the talents of the students in the areas of their interests</li> <li>• Students may choose this basket across the Departments/Centres/School to attain hands-on learning in a focused area</li> </ul>
<b>Open Elective Courses (OEC)</b>	Institutes across the globe*/ NPTEL/IITR**	6-8	<ul style="list-style-type: none"> <li>• *Departments/Centres/School will identify such universities/institutes across the globe from which credit and grade transfer be allowed</li> <li>• DAPC/CAPC/ScPC will play a major role in identifying/selecting the institutes/courses</li> <li>• **All Deptts./ Centres/ Schools may contribute to the basket <b>irrespective of offering an UG program</b></li> </ul>
<b>Co-curricular Activities</b>  (Credits earned under CORE and Discipline not to be considered for the calculation of SGPA/CGPA)	Community Outreach (CORE)	2	<ul style="list-style-type: none"> <li>• To provide/create opportunities for students to work with the society in the form of community development project/rural upliftment of the underprivileged etc.</li> <li>• This may also be done in association with GoI recognized NGOs, local government bodies, boot camps etc., if required.</li> <li>• The evaluation strategy be formulated by an Institute/Department level committee</li> </ul>
	Discipline	2	<ul style="list-style-type: none"> <li>• Excellent/Good/Satisfactory/Unsatisfactory</li> <li>• Satisfactory/Unsatisfactory</li> <li>• To be evaluated by DOSW</li> </ul>
	NCC/NSS/NSO	2	<ul style="list-style-type: none"> <li>• Evaluation to start w.e.f. I Yr- 2<sup>nd</sup> semester, grades be submitted in the final semester.</li> </ul>
	<b>Total Credits to be earned</b>		<b>158–170</b>
<b>Minor Specialization Courses (MSC)* / Department Honor Courses (DHC)</b>		<b>18–20</b>	<ul style="list-style-type: none"> <li>• *Departments/Centres/School to develop their minor specialization course baskets</li> <li>• Such baskets may be <b>theme based and offered independently or jointly with other Departments/Centres/School</b></li> </ul>

**Table 2. Structure of 5-Year Int. M. Tech, BS-MS and B. Arch. programs (for remarks, see the table above)**

Main Curriculum components	Types of Courses	Range of Credits and Credits to be earned for five year programs			
		Int. M.Tech.	BS-MS	B.Arch.	
Institute Core Courses (ICC)	HSSC	5-8	5-8	5-8	
	BSC	8-20	12-24	8-20	
	ESC	8-20	8-20	8-20	36-44
	ESSC	3	3	3	
	MC	3	3	3	
	TM	4	4	4	
	Class Contact Core Courses	80-100	92-102		
	Eng. Anal & Design	0-4	-	35-45	
	Industry Oriented Problem/Lab-based Project/Practical Problem/Case Study/Seminar/Practical Training & Internship	0-4	0-4	10	
	Tech. Comm	3	3	3	
	Project	12-18	12-16	15	
	PEC	24-36	24-36	15-30	148-160
Program Core Courses (PCC)	TEB	6-8	6-8	6-8	
	OEC		6-8	6-8	
	CORE	2	2	2	
	Discipline	2	2	2	
	NCC/NSS/NSO	2	2	2	
	<b>Total Credits</b>	<b>194-212</b>	<b>200-212 (for BS:158-170)</b>		<b>200-212</b>
With MSC/DHC (Additional 18-20 credits)		<b>212-232</b>	<b>218-232</b>		<b>218-232</b>

**Table 3. Tinkering and Mentoring**

(Semester long course to be evaluated on continuous evaluation mode as per the following scheme)

<b>To be coordinated by an Institute level Coordinating Committee (3-4 members each for Tinkering and Mentoring)</b>		
	<b>(A) Tinkering<sup>#</sup></b>	<b>(B) Mentoring</b>
	Students will choose projects under the guidance of their parent department/centre/school/other central facilities	Common syllabus (Lecture based)
<b>Components</b>	Tinkering and Learning: Project based course to nurture creative abilities of students	Ethics, IPR, Entrepreneurship
<b>Weightage</b>	50%	50%

**Notes<sup>#</sup>:**

- (i) May have projects (individual/common to all students) in coordination with DIC/ReThink Tinkering Lab or other central facilities
- (ii) May have department level projects (Considering branch changes, departments may encourage multidisciplinary projects)
- (iii) The committee will coordinate with the concerned departments/centres/school regarding all aspects (Formulation, execution, evaluation and logistics of the projects)

#### 4. Semester wise plan

Table 4. First Year: Autumn Semester

Sl. No	Course Code	Course Name	Type	Credit
1	MAB-101	Mathematics-1	BSC	4
2	XXC-101	Computer Programming (*Dept. Specific)	PCC*/ESC	4
3	XXB-10X	Department specific course	BSC	4
4	HSI-101	Communication Skills	HSSC	2
5	TMI-101	Tinkering and Mentoring	TM	4
<b>Total</b>				<b>18</b>

Table 5. Other Semesters

Year	Semester	Course Types	Remarks
I	Spring	BSC, ESC, ESSC, HSSC, PCC	Departments/Centres/School may distribute the courses of different types as per the requirements
	Autumn	BSC, ESC, ESSC, HSSC, MC, PCC, PEC	
	Spring	BSC, ESC, ESSC, HSSC, MC, PCC, PEC	
III	Autumn	BSC, ESC, ESSC, HSSC, MC, PCC, PEC, MSC/DHC	* for BS-MS, IMT and B. Arch Programs
	Spring	BSC, ESSC, HSS, MC, PCC, PEC, MSC/DHC	
IV	Autumn	for Project/PEC, MSC/DHC	* PCC, PEC, MSC/DHC
	Spring	B. Tech Project/PEC, MSC/DHC [NCC/NSS/NSO]	
V	Autumn	Project/PEC#	<ul style="list-style-type: none"> <li># For BS-MS and IMT</li> <li>For B. Arch: PCC/PEC/Project/MS/DHC</li> </ul>
	Spring	Project/PEC# [NCC/NSS/NSO]	

## 5. Salient Features

- Departments/Centre/School may select the BSC and ESC courses within the range suggested.
- PCC and PEC credits may be decided as per the requirement of the program/deptt./centre/school within the limits of the total credits.
- Project is optional for four-year programs. The equivalent credits may be earned through additional PECs in 1–2 semester(s) as decided by the Department/Centre/School.
- It is suggested that one of the semesters in the final (fourth/fifth) year is planned without any course work for the students who will carry out projects outside IITR.
- Departments/Centre/School may distribute the courses (and make syllabi) across the semesters in view of implementation of possible exit options.

## 6. Others :

In view of fast-changing technologies, Departments/Centres/School are suggested to offer courses based on Artificial Intelligence (AI), Data Science (DS), Big-Data Analysis (BDA), Machine Learning (ML) etc., if possible.

## 7. Some of the suggested Course Codes:

Course Categories	Basic Science (BSC)	Engineering Science (ESC)	Open Elective (OEC)	Program Core (PCC)	Program Elective (PEC)	Institute core courses			Environmental & Sustainability Science (ESSC)	Project (PROJ)
						HSS (HSSC)	Management (MC)	Tinkering & Mentoring (TM)		
Example Codes	CYB-101 PHB-101 MAB-101 BSB-101	ARE-101 BSE-101 CEE-101 CSE-101 ECE-101 EEE-101 MEE-101 MTE-101 PHE-101	ARO-101 BSO-101 CEO-101 CSO-101 CYO-101 ECO-101 EEO-101 MAO-101 MTO-101 PHO-101	ARC-101 BSC-101 CEC-101 CSC-101 ECC-101	ARL-101 BSL-101 CEL-101	HSI-101 (Humanities & Social Sciences - Institute level Courses)	MSI-101 (Management Studies - Institute level Courses)	TMI-101	ESS-101 ESS-102 ESS-103 ESS-104	BTP-4xx BSP-4xx MSP-5xx IMTP-5xx ARP-5xx

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**Item No. 90.4: To consider the report of the committee constituted to create a proposal for a comprehensive “Exit Policy” of the academic programs.**

The Senate, vide Item No. 87.10, decided that a committee be constituted to create a proposal for a comprehensive ‘Exit Policy’ for the academic programs of the Institute. The Chairman, Senate constituted a Senate Committee as follows (vide Notification No. Acad./2180/Senate-87, dated- December 06, 2021) for preparing a proposal for consideration of Senate:

- |   |               |
|---|---------------|
| 1. Prof. Sanjeev Manhas, ECD            | - Chairperson |
| 2. Prof. Inderdeep Singh, Head, DoD     | - Member      |
| 3. Prof. Tanuja Srivastava, MA          | - Member      |
| 4. Prof. B V Manoj Kumar, MMED          | - Member      |
| 5. Prof. Akhil Upadhyaya, CED           | - Member      |
| 6. Prof. C N Ramachandran, ADoAA-Curri. | - Member      |

The Committee submitted its report to the Chairman, Senate as placed at **Appendix – A**.

The above is submitted for the consideration and approval of the Senate.

**'Exit Policy' for the academic programs of IIT Roorkee**

**Preamble**

To facilitate flexibility in career planning, as well as to recognize the knowledge and training of the students who are not able to continue a program for personal reasons or due to academic requirements in a program, there is a need to provide the students admitted to various programs at IIT Roorkee an option to take an exit from a program with due credits. This is also consistent with National Education Policy 2020, which allows for provision of exiting from a program after the student has finished certain years or earned minimum credits in a program to meet exit requirement. This document provides guidelines and criteria for exiting the programs being run at IIT Roorkee keeping in view: (a) existing curriculum/program structure of various degree programs and curriculum review in future, and (b) IITR experience and performance of the students in UG and PG programs.

**Exit Rules**

1. Any students who fulfill the minimum criteria mentioned for exit in the Table 1 below will be eligible for exit from the program with due recognition/credits.
2. A student may apply for an exit option from a program which will be recommended by Dept Academic Program Committee/Dept Research Committee
3. A student may also be recommended for exit from the program by the concerned Dept Academic Program Committee/Research Committee, however final decision to take exit will rest with the student.
4. Exiting a program shall be on the recommendation of concerned Dept Academic Program Committee/ Research Committee on having met the requirement of the exit provisions, the exit can be allowed.
5. In the event of conditions in 3 and 4 being fulfilled the student will be awarded exit certificate.
6. Wherever applicable the scholarship/teaching assistantship shall be stopped with effect from the date of approval.
7. A student exiting the program will be required to submit no dues as per the existing process.

**Table1: Exit Certificate (s) for various programs**

B.Tech	BS-MS	B.Arch	Int. M.Tech	M.Sc	M.Tech/M.Arch/M.URP/M.Des/MIM	MBA	Ph.D
<b>Three Year UG Certificate in Discipline</b> (3 Yrs. or more & minimum 84 Credits)	<b>Three Year UG Certificate in Discipline</b> (3 Yrs. or more & minimum 84 Credits)	<b>Three Year Certificate in Discipline</b> (3 Yrs. or more & minimum 84 Credits)	<b>Three Year UG Certificate in Discipline</b> (3 Yrs. or more & minimum 84 Credits)	---	---	---	
<b>Two Year UG Certificate in Discipline</b> (2 Yrs. or more & minimum 56 Credits)	<b>Two Year UG Certificate in Discipline</b> (2 Yrs. or more & minimum 56 Credits)	<b>Two Year Certificate in Discipline</b> (2 Yrs. or more & minimum 56 Credits)	<b>Two Year UG Certificate in Discipline</b> (2 Yrs. or more & minimum 56 Credits)	---	---	---	<b>MS by Research</b> (Minimum 1 year after candidacy with the recommendation of SRC and successful viva-voce examination of MS-Thesis. Such students may be given up to six months of time to sum up the work and submit the MS-Thesis for the award of MS-Research Degree). Examination Board may be constituted for this purpose.
<b>One Year UG Certificate in Discipline</b> (Minimum 1 Yr & 28 Credits)	<b>One Year UG Certificate in Discipline</b> (Minimum 1 Yr & 28 Credits)	<b>One Year UG Certificate in Discipline</b> (Minimum 1 Yr & 28 Credits)	<b>One Year UG Certificate in Discipline</b> (Minimum 1 Yr & 28 Credits)	<b>One Year PG Certificate in Discipline</b> (Minimum 1 Yr & 36 Credits)	<b>One Year PG Certificate in Discipline</b> (Minimum 1 Yr & 32 Credits)	<b>One Year PG Certificate in Discipline</b> (Minimum 1 Yr & 42 Credits)	<b>One Year Certificate of Research Internship in Discipline/Specialization - (Before candidacy; minimum 1 year including 3 Months of minor project and Seminar with the recommendation of SRC).</b>



**Note:**

- I. The requirement of minimum number of years is excluding the semester withdrawal, if any.
- II. Minimum Credits for exit certificate = Number of minimum years ✕ Minimum effective credits for the continuation of the program in a year

**Switch Over programs:**

- I. IDD: No Change
- II. M. Tech-Ph.D & M.Sc -Ph.D: For those who wish to switch-back to M.Tech/M.Sc, the degree may be awarded, provided thesis stage(s) and viva-voce are successfully completed.

**Annexure:**

- I. FORM TO OPT FOR EXIT FROM PROGRAM
- II. RECOMMENDATION FOR EXIT FROM PROGRAMME

**Annexure – I**

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE  
FORM TO OPT FOR EXIT FROM PROGRAM  
(BY STUDENT)**

I, Mr./ Ms. \_\_\_\_\_, Enrolment No. \_\_\_\_\_,  
Program Name \_\_\_\_\_, Year \_\_\_\_\_,  
Department/ Centre/ School of \_\_\_\_\_  
wish to opt for exit from the said program offered by IIT Roorkee with  
\_\_\_\_\_Credits earned by me after \_\_\_\_\_ years of the program. Kindly  
grant me an exit with \_\_\_\_\_(Name of the  
certificate)

I do understand that exiting from the program is subject to approval  
by the Dean of Academic Affairs (DoAA) through  
DAPC/CAPC/ScAPC/DRC/CRC/ScRC. Once the exit is granted, it will be  
irrevocable. I also submit an undertaking that Exit Certificate as per the  
institute Exit Policy will be acceptable to me

Date: \_\_\_\_\_ (Signature of the student)

**RECOMMENDATION OF DAPC/CAPC/ScAPC/DRC/CRC/ScRC**

**Recommended/ Not Recommended** for \_\_\_\_\_(Name of the  
Certificate) under Exit policy of the institute on vogue.

Date: \_\_\_\_\_ (Signature of Chairperson,  
DAPC/CAPC/ScAPC/DRC/CRC/ScRC)

**RECOMMENDATION OF HEAD, DEPARTMENT/ CENTRE/ SCHOOL**

**Recommended/ Not Recommended** for \_\_\_\_\_ (Name of the  
Certificate) under Exit policy of the institute in vogue.

Date : \_\_\_\_\_ (Signature of Head)

**APPROVAL OF DEAN OF ACADEMIC AFFAIRS (DOAA)**

**Approved/ Not Approved** for \_\_\_\_\_(Name of the Certificate)  
under Exit policy of the institute on vogue.

Date: \_\_\_\_\_ (Signature of DoAA)

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**  
**RECOMMENDATION FOR EXIT FROM PROGRAMME**  
**(BY DEPARTMENT/CENTRE/SCHOOL)**

Name \_\_\_\_\_ of Mr./Ms. \_\_\_\_\_, Enrolment No. \_\_\_\_\_, pursuing \_\_\_\_\_ (Program Name), in the Year \_\_\_\_\_ at the Department/Centre/School of \_\_\_\_\_ is hereby recommended for exit from the said program due to \_\_\_\_\_ according to the institute's regulations. The student has completed \_\_\_\_\_ Credits with CGPA \_\_\_\_\_ till date.

Mr./Ms. \_\_\_\_\_ has been recommended for award of \_\_\_\_\_ (Name of the Certificate) under Exit policy of the Institute.

Date: \_\_\_\_\_ (Signature of Chairperson,  
DAPC/CAPC/ScAPC/SRC/CRC/ScRC)

**RECOMMENDATION OF HEAD, DEPARTMENT/ CENTRE/ SCHOOL**

**Recommended/ Not Recommended** for \_\_\_\_\_ (Name of the Certificate) under Exit policy of the institute in vogue.

Date: \_\_\_\_\_ (Signature of Head)

**APPROVAL OF DEAN OF ACADEMIC AFFAIRS (DOAA)**

**Approved/ Not Approved** for \_\_\_\_\_ (Name of the Certificate) under Exit policy of the institute on vogue.

Date: \_\_\_\_\_ (Signature of DoAA)

**Item No. 90.5: To consider the proposal to implement 75% attendance requirement w.e.f. from Spring 2021-22 for all students (excluding I year of UG-Spring).**

The IAPC in its 116<sup>th</sup> meeting held on 02.02.2022, considered the proposal received from General Secretary, Academic Affairs (UG) to waive off the attendance requirement for Spring 2021-22 for all students **(Appendix-A)**.

The IAPC did not recommend the proposal. The IAPC, however, suggested that for the current semester, the 75% attendance requirement be applicable w.e.f. Feb. 02, 2022 for all programmes. For MBA, the above attendance requirement will be applicable for Term 4 and Term 8 only.

It is stated that the Senate, vide Item No. 89.3, decided that the classes will continue with on-line mode of teaching until further review. It was further suggested that wherever possible, the faculty members are encouraged to adopt hybrid mode of teaching in which students in the campus can join physically while others can join online.

At present, more than 4200 students (excluding the UG first year) are in the campus. There are no COVID-19 cases being reported in the campus in the current month.

It is informed that the Institute, vide a Notification-dated April 08, 2020, has been offering few new provisions to the students owing to the outbreak of COVID-19 **(Appendix-B)**. In view of the improvement in the situation, the continuance of the Notification may also be reviewed.

The above is submitted for the consideration and approval of the Senate.

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**Regarding 75% attendance rule**

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**From :** General SecretaryAAUG <gensec.ugacads@iitr.ac.in> Wed, Jan 19, 2022 05:46 PM  
**Subject :** Regarding 75% attendance rule  
**To :** Assit RegistrarCurriculum <arcurriculum@iitr.ac.in>  
**Cc :** Dean AcademicAffairs <daa@iitr.ac.in>

Respected ma'am,

Although this semester was planned to be held in hybrid mode, due to the omicron virus and the pandemic third wave it is being held in the online mode. Last semester although many students who were facing network issues came back to the campus most of them returned home for holidays. Now even if they would like to come back to the campus, entry of students not residing in the campus has been suspended. Also due to the third wave many students and their families are getting infected with Covid and in these situations such students will not be able to attend classes.

As all these situations are similar to the previous semesters' situations, the 75% attendance rule must be waived off for this semester also. I request you to please look into this matter and do the needful.

Thanks & Regards  
Malavika SDL  
GSAA(UG)

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**From:** "Dean AcademicAffairs" <daa@iitr.ac.in>  
**To:** "PHD-Students" <phd-students@iitr.ac.in>, "Staff- Notices" <staff-notices@iitr.ac.in>  
**Cc:** "Assoc DeanofAcademicAffairs" <adaa-evaluation@iitr.ac.in>, "Assit RegistrarEvaluation" <arevaluation@iitr.ac.in>  
**Sent:** Wednesday, April 8, 2020 5:59:34 PM  
**Subject:** Notification for PhD Programme

### **NOTIFICATION**

In view of the suspension of conventional classroom teaching due to the outbreak of COVID-19, on the recommendation of the Institute Research Committee (IRC) meeting held on 4<sup>th</sup> April 2020, the Chairman Senate has approved the following:

1. The time period between 16th March 2020 till the date on which students will be allowed to return to the campus will be excluded from the allowed time limits of candidacy requirements and thesis submission of the PhD programme.
2. Presentations related to research proposal, yearly presentation, pre-synopsis and final viva-voce are allowed through video conferencing with immediate effect and up to three weeks beyond the date on which students will be allowed to return to the campus.

Narayana

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एन0 पी0 पाढ़ी/N. P. Padhy  
कुलशासक शैक्षणिक अफेयर्स/Dean, Academic Affairs  
भारतीय प्रौद्योगिकी संस्थान, रुड़की  
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[वेबपेज /Webpage](#)  
[ऑफिस वेबपेज /Office Webpage](#)

**Item No. 90.6: To consider the revised structure of M.Sc. Chemistry proposed by the Department of Chemistry. (Appendix-A)**

The department of Chemistry has introduced the BS-MS (Chemical Sciences) curriculum w.e.f. the AY 2021-2022. Therefore, modification in the structure of the M.Sc. (Chemistry) program was necessitated to align it with the changes due to introduction of the five-year BS-MS curriculum which has exit option after four years.

The IAPC, in its 115<sup>th</sup> meeting held on 12.01.2022, considered and recommended the proposal for revision in the structure of the M.Sc. (Chemistry) program. The changes include – shifting of courses, changes in course codes and updating the list of electives.

The above is submitted for the consideration and approval of the Senate.

**DEPARTMENT OF CHEMISTRY**  
**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XX M.Sc. (Chemistry)**  
Department: **CY Chemistry**  
Year: **I**

Teaching Scheme				Contact Hours/Week			Exam. Duration		Relative Weight (%)											
S.No.	Subject Code	Course Title	Subject Area	Credits	L			T		P		Theory		Practical		CWS	PRS	MTE	ETE	PRE
Semester-I (Autumn)																				
1.	CY-501	Quantum Chemistry, Symmetry and Group Theory	PCC	4		3	1		0	3	0		20-35	0	20-30	40-50	0			0
2.	CY-503	Thermodynamics, Interfaces and Solids	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
3.	CY-521	Advanced Analytical Methods	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
4.	CY-507	Structure and Reactivity of Organic Molecules	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
5.	CY-509	Advanced Coordination Chemistry	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
6.	CY-511	Organic Chemistry Laboratory	PCC	4		0	0		8	0	8		0	25-35	20-30	0	40-50			
7.	HSN-501	Technical Communication	PCC	2		2	0		0	2	0		20-35	0	20-30	40-50	0			0
Total				22																
Semester-II (Spring)																				
1.	CY-502	Advanced Organometallic Chemistry	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
2.	CY-504	Kinetics and Photochemistry	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
3.	CY-506	Organic Reaction Mechanisms	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
4.	CY-508	Molecular Spectroscopy	PCC	3		3	0		0	3	0		20-35	0	20-30	40-50	0			0
5.	CY-510	Inorganic Chemistry Laboratory	PCC	4		0	0		8	0	8		0	25-35	20-30	0	40-50			
6.	CY-534	Physical Chemistry Laboratory	PCC	4		0	0		8	0	8		0	25-35	20-30	0	40-50			
7.		Program Elective-I	PEC	3		-	-		-	-	-		-	-	-	-	-			-
Total				23																



**DEPARTMENT OF CHEMISTRY**  
**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XX M.Sc. (Chemistry)**  
Department: **CY Chemistry**  
Year: **II**

Teaching Scheme				Credits	Subject Area	Course Title	Contact Hours/Week			Exam. Duration		Relative Weight (%)					
S.No.	Subject Code		L				T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE		
Semester-I (Autumn)																	
1.	CY-601	Project - I		PCC	4	0	0	0	8	0	0	0	0	0	0	100	0
2.		Program Elective-II		PEC	3	-	-	-	-	-	-	-	-	-	-	-	-
3.		Program Elective-III		PEC	3	-	-	-	-	-	-	-	-	-	-	-	-
4.		Program Elective-IV		PEC	3	-	-	-	-	-	-	-	-	-	-	-	-
5.		Program Elective-V		PEC	3	-	-	-	-	-	-	-	-	-	-	-	-
6.		Program Elective-VI		PEC	3	-	-	-	-	-	-	-	-	-	-	-	-
Total					19												
Semester-II (Spring)																	
1.	CY-602	Project - II		PCC	8	0	0	0	16	0	0	0	0	0	0	100	0
2.	CY-604	Seminar		SEM	2	0	0	0	0	0	0	0	0	0	0	100	0
3.		Program Elective-VII		PEC	3	-	-	-	-	-	-	-	-	-	-	-	-
Total					13												

Summary				
Semester		1	2	3
Semester-wise Total credits		22	23	19
Total Credits		77		

## List of Program Elective Courses

Teaching Scheme					Contact Hours/Week			Exam. Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1.	CY-512	Nuclear and Radiochemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
2.	CY-514	Heterocyclic Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
3.	CY-518	Structure, Bonding and Properties of Solids	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
4.	CY-520	Inorganic Rings and Polymers	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
5.	CY-606	Total Synthesis	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
6.	CY-607	Electroanalytical Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
7.	CY-608	Chemical Biology	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
8.	CY-609	Inorganic Biochemistry and Reaction Mechanism	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
9.	CY-610	Molecular Modeling and Simulations	PEC	3	2	0	2/2	2	0	15-30	20	15-25	30-40	0
10.	CY-612	Carbon Nanomaterials and their Applications	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
11.	CY-613	Frontiers in Inorganic Biochemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
12.	CY-614	Asymmetric Synthesis	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
13.	CY-615	Crystal and Molecular Structure	PEC	3	2	0	2/2	2	0	15-30	20	15-25	30-40	0
14.	CY-617	Supramolecular Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
15.	CY-619	Modern Organic Synthetic Methods	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
16.	CY-621	Organic Structure Determination	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
17.	CY-623	Organic Semiconductors	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
18.	CY-625	Proteins and Polypeptides	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
19.	CY-627	Advanced Surface and Colloidal Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
20.	CY-629	Advanced Physical Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
21.	CY-633	Nanoscale Materials: Properties and Applications	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0

22.	CY-635	Advanced Magnetic Resonance Spectroscopy	PEC	3	3	0	0	0	3	0	20-35	0	20-30	40-50	0
23.	CY-638	Reactivity, Structure Determination, Devices and Electronic Structure of Solids	PEC	3	2	0	2/2	2	0	15-30	20	15-25	30-40	0	
24.	CY-703	Advanced Material Characterization Techniques	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0	
25.	CY-902	Advanced Inorganic Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0	
26.	CY-903	Advanced Organic Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0	
27.	CY-904	Advanced Physical Chemistry	PEC	3	3	0	0	3	0	20-35	0	20-30	40-50	0	
28.	CY-905	Spectroscopic Methods of Structural Elucidation	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0	

**Item No. 90.7: To consider the following proposals of the Department of Electrical Engineering:**

- (i) To introduce a M.Tech. programme on 'Electric Vehicle Technology'**
- (ii) To revise the structure of M.Tech. (Systems and Control)**

The Electric Vehicle (EV) industry is fast expanding globally. In order to meet the requirements of automobile industries, the Department of Electrical Engineering has identified the need to train engineers to take the challenges associated with EV technologies. Therefore, the department has proposed a masters program on 'Electric Vehicle Technology' to be offered w.e.f. the academic session 2022-2023.

The proposed programme is also aligned with the scheme for Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India, under the National Electric Mobility Mission Plan 2020 of the Government of India.

The IAPC, in its 117<sup>th</sup> meeting held on 23.02.2022, recommended the programme structure placed at **Appendix-A** with minor observations.

The regular intake for the program has been recommended as 15, whereas, the intake for industry sponsored candidates shall remain as supernumerary as in the other Masters programs. The IAPC recommended the discipline wise intake and MEQ with modifications as placed at **Appendix-B**.

The IAPC also recommended the proposal to revise the existing structure of M.Tech. (Systems and Control). The changes are:

<b>Semester I</b>	
<b>Existing</b>	<b>Revision</b>
EEN-561: Mathematics (PCC, 4 credit)	EEN-584: Mathematics for Systems and Control (PCC, 4 credit)
EEN-583: Non Linear and Robust Control (PCC, 4 credit)	EEN-585: Non Linear Systems and Control (PCC, 4 credit)

The recommended structure is given at **Appendix-C**.

The above is submitted for the consideration and approval of the Senate.

**DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XXX M.Tech. (Electric Vehicle Technology)**  
 Department: **EE Department of Electrical Engineering**  
 Year: **I**

Teaching Scheme				Subject Area		Credits	Contact Hours/Week			Exam Duration		Relative Weight (%)				
S.No.	Subject Code	Course Title	L				T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE	
Semester- I (Autumn)																
1.	EEN-501	Electric Vehicles : Power Train & Drives	PCC	4	3	0	2	3	-	10-25	25	15-25	30-40	-		
2.	EEN-503	Energy Storage Techniques	PCC	4	3	0	0	3	-	20-35	-	20-30	40-50	-		
3.	EEN-505	Charging Infrastructure	PCC	4	3	0	2	3	-	10-25	25	15-25	30-40	-		
4.	EEN-507	Control Systems for Electric Vehicle	PCC	4	3	0	2	3	-	10-25	25	15-25	30-40	-		
5.	MIN-XXX	Automobile Engineering for EVs	PCC	4	3	1	0	3	-	20-35	-	20-30	40-50	-		
		Total		20												
Semester-II (Spring)																
1.	EEN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-		
2.		Program Elective-I	PEC	4	-	-	-	-	-	-	-	-	-	-		
3.		Program Elective-II	PEC	4	-	-	-	-	-	-	-	-	-	-		
4.		Program Elective-III	PEC	4	-	-	-	-	-	-	-	-	-	-		
5.		Program Elective-IV	PEC	4	-	-	-	-	-	-	-	-	-	-		
		Total		18												

**DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XXX M.Tech. (Electric Vehicle Technology)**  
 Department: **EE Department of Electrical Engineering**  
 Year: **II**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Semester-I (Autumn)														
1.	EEN-701A	Thesis Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.														
Semester-II (Spring)														
1.	EEN-701B	Thesis Stage-II (continued from III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

Summary					
Semester	1	2	3	4	
Semester-wise Total Credits	20	18	12	18	
Total Credits	68				

**Program Elective Courses for M.Tech. (Electric Vehicle Technology)**

Teaching Scheme														
Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	EFE	PRE
1.	EEN-540	Advanced Power Electronics	PEC	4	3	1	2/2	3	-	15-30	20	15-25	30-40	-
2.	EEN-542	Power Electronic Controlled Electric Drives	PEC	4	3	1	2/2	3	-	15-30	20	15-25	30-40	-
3.	EEN-641	Microcontroller and Its Applications to Power Converters	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
4.	EEN-642	DSP Controlled Electric Drives	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
5.	EEN-643	Electric Drives for Hybrid Vehicles	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
6.	EEN-644	Design of Electric Drives	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
7.	EEN-645	Instrumentation in Electric Drives	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
8.	EEN-646	Drive System in Electric Traction	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
9.	EEN-647	Control Techniques in Power Electronics for AC Drives	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
10.	EEN-648	Pulse Width Modulation for Power Converters	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
11.	EEN-650	Switch Mode Power Supply	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
12.	EEN-655	Special Machines	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
13.	EEN-521	Digital Signal and Image Processing	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
14.	EEN-524	Intelligent Sensors and Instrumentation	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
15.	EEN-611	FPGA Implementation of Signal Processing Systems	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
16.	EEN-621	Noise and Interference in Instrumentation	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-



17.	EEN-673	Design of WBG Device based Power Converters	PEC	4	3	0	2/2	3	-	15-30	20	15-25	30-40	-
18.	EEN-668	Digital Protection of Power System	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
19.	EEN-680	Machine Learning	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
20.	EEN-682	Advanced Digital System Design	PEC	4	3	0	2	3	-	10-25	25	15-25	30-40	-
21.	EEN-697	Dynamics and Control of Autonomous Vehicles	PEC	4	3	1	2/2	3	-	15-30	20	15-25	30-40	-
22	EEN-699	Smart Grid for EVs	PEC	4	3	0	0	3	-	15-30	-	20-30	40-50	

**M.Tech. Electric Vehicle Technology**  
**Seat Matrix, MEQ and Admission Process**

**Seat Matrix:**

Academic Department/ Centre & (Code)	Academic Programmes		Main GATE Discipline(s)	Categories				Other GATE Disciplines	Categories				EWS 10%	Total Intake
				UR	OBC	SC	ST		UR	OBC	SC	ST		
Electrical Engineering (EE)	M.Tech. Electric Vehicle Technology	56	EE(15)	6	4	2	1	-	-	-	-	-	2	15

Sponsored candidate- Seats are supernumerary

**Minimum Eligibility Criteria:**

Candidates belonging to General, GEN-EWS and OBC category must have secured at least 60% marks or CGPA of 6.00 on a 10-point scale at the qualifying degree level; Candidates belonging to SC/ST/PD category, must have secured 55% or 5.50 CGPA on a 10-point scale. The marks awarded for the qualifying degree will be considered for eligibility.

**Minimum Educational Qualification:** B.Tech. (Electrical Engineering) or equivalent.

**Eligible GATE Disciplines:** Electrical Engineering (EE)

**International Candidates:** The international students can apply through ITEC/ICCSR/ASEAN or other MEA portals through Indian Embassies in respective countries. Such students can apply through the International Relations Portal of IIT Roorkee <https://ir.iitr.ac.in/HowToApply>

**Sponsored candidates (Full-time & Part-Time):** In line with other M.Tech. programmes of the Institute.

**Note:** The candidates working in Institute /University awarding a PG degree itself are not eligible for admission as Part-Time or Full-Time candidates if facilities are not available except QIP Candidates.

**DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **28**    **M.Tech. (Systems & Control)**  
 Department: **EE**    **Department of Electrical Engineering**  
 Year: **I**

Teaching Scheme				Contact Hours/Week		Exam Duration		Relative Weight (%)								
S. No.	Subject Code	Course Title	Subject Area									Credits				
				L	T	P	Theory	Practical	CWS	PRS	MTE		ETE	PRE		
Semester- I (Autumn)																
1.	EEN-584	Mathematics for Systems and Control	PCC	4	3	1	0	3	-	20-35	-	20-30	40-50	-		
2.	EEN-580	Advanced Linear Control Systems	PCC	4	3	1	2/2	3	-	15-30	20	15-25	30-40	-		
3.	EEN-581	Intelligent Control Techniques	PCC	4	3	0	2	3	-	10-25	25	15-25	30-40	-		
4.	EEN-582	Advanced System Engineering	PCC	4	3	0	2	3	-	10-25	25	15-25	30-40	-		
5.	EEN-585	Non Linear Systems and Control	PCC	4	3	1	0	3	-	20-35	-	20-30	40-50	-		
		Total		20												
Semester-II (Spring)																
1.	EEN-XXX	Program Elective-I	PEC	4	-	-	-	-	-	-	-	-	-	-		
2.	EEN-XXX	Program Elective-II	PEC	4	-	-	-	-	-	-	-	-	-	-		
3.	EEN-XXX	Program Elective-III	PEC	4	-	-	-	-	-	-	-	-	-	-		
4.	EEN-XXX	Program Elective-IV	PEC	4	-	-	-	-	-	-	-	-	-	-		
5.	EEN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-		
		Total		18												

**Item No. 90.8: To consider request of Ms. Somya Jain (En.No. 19121032), B.Tech. (Polymer Science & Engg.) to remove the (\*) marked for re-examination on the grade sheets of Spring Semester (2019-20).**

As per clause 1(A)(ii) of the Semester Completion plan for Spring Semester 2019-20, “a student who obtains a pass letter grade (D and above) in a course will have the option to either get it converted into a Satisfactory (S) grade (with no grade point) which will be treated as final or appear in a re-examination later”.

In the present practice, (\*) is marked in case of students who appeared for re-examination due to fail grade/for not being satisfied with the pass grade obtained. The student requested (on behalf of her batchmates) to remove the (\*) mark from the grade sheet as there was no specific notice regarding it. The students are apprehensive that they might face obstruction in further studies and prospects due to this (\*) mark.

The IAPC, in its 117<sup>th</sup> meeting held on 23.02.2022, did not recommend the request.

The above is submitted for the consideration of the Senate.

**Item No. 90.9: To consider a proposal to revise the discipline eligibility for admission into the M.Tech. Polymer Science and Engineering program of the Department of Polymer and Process Engineering and to increase the intake w.e.f. the Academic Session 2022-23.**

The Department of Polymer and Process Engg. is currently offering the M.Tech. (Polymer Science & Engg.) program with eleven (11) intakes. The department is convinced that with the available resources and reasonable infrastructure, coupled with strong industry connect, it can potentially make this M. Tech. program more popular. Therefore, with a view to achieve this and for enhanced utilization of the resources, the department proposed minor changes in the discipline eligibility for admission into the program w.e.f. the Academic Session (2022-23). The department also proposed to increase the intake of the program to thirty (30)

The IAPC in its 116<sup>th</sup> meeting held on 02.02.2022, recommended to increase the number of intake for M.Tech. Polymer Science and Engineering to twenty-two (22).

Later, the IAPC in its 117<sup>th</sup> meeting held on 23.02.2022, recommended the discipline wise grouping of intake as under:

Academic Department/ Centre & (Code)	Academic Programmes		Main GATE Discipline(s)	Categories				Other GATE Disciplines	Categories				EWS 10%	PD 5%	Total Intake
				UR	OBC	SC	ST		UR	OBC	SC	ST			
Polymer and Process Engg	M.Tech. Polymer Science and Engg.	52	CH & XE (12)	5	4	2	1	CY/ME/PE/PI/TF (8)	4	2	1	1	2	1	22

The above is submitted for the consideration and approval of the Senate.

**Item No. 90.10: To consider the following proposals of the Department of Civil Engineering:**

- (i) **To rename the existing M.Tech. program on ‘Geomatics Engineering’ as “Geospatial Engineering” w.e.f. the Academic Session 2022-23.**
- (ii) **To include Geomatics Engineering (GE) as eligibility for M.Tech. Geomatics Engg. under the Main GATE Discipline.**

The IAPC, in its 116<sup>th</sup> meeting held on 02.02.2022, considered and recommended the proposal of the department to rename the existing M.Tech. program on ‘Geomatics Engineering’ as “Geospatial Engineering”.

The IAPC in its 117<sup>th</sup> meeting held on 23.02.2022, recommended the proposal **(Sr. No. 2)** to include ‘Geomatics Engineering (GE)’ under Main GATE Discipline (“CE”) in M.Tech. ‘Geospatial Engg.’ (subject to approval of Senate). The recommended seat matrix is as under:

Academic Department/ Centre & (Code)	Academic Programmes		Main GATE Discipline(s)	Categories				Other GATE Disciplines	Categories				EWS 10%	Total Intake
				UR	OBC	SC	ST		UR	OBC	SC	ST		
Civil Engineering (CED)	M.Tech. Geomatics Engg.	17	CE /GE(9)	4	3	1	1	AR/CS/EC / EE/AG/MN (4)	2	1	1	0	1	14

The above proposals are submitted for the consideration and approval of the Senate.

**Item No. 90.11: To consider the following proposals of Department of Water Resources Development and Management for M.Tech. Drinking water and Sanitation programme from Academic Session 2022-23:**

- 1. Structure (Appendix-A)**
- 2. Seat matrix and Minimum Eligibility Qualifications (MEQ) (Appendix-B)**

The Senate, in its 89<sup>th</sup> meeting held on 09.12.2021, considered and approved the proposal of the department to introduce M.Tech. programme on "Drinking Water and Sanitation" along with its structure. The Senate, however, suggested that the admission process and curriculum of the programme be reconsidered by IAPC and the revised curriculum be placed before the Senate.

The IAPC, in its 116<sup>th</sup> and 117<sup>th</sup> meetings held on 02.02.2022 and 23.02.2022, respectively considered the structure, syllabi, seat matrix, MEQ and admission process of the said programme. The IAPC recommended the proposals as placed at **Appendix-A and B.**

The above proposals are submitted for the consideration and approval of the Senate.

**DEPARTMENT OF WATER RESOURCES DEVELOPMENT AND MANAGEMENT**  
**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XXX M.Tech. (Drinking Water and Sanitation)**  
 Department: **WR Department of Water Resources Development and Management**  
 Year: **I**

Teaching Scheme			Contact Hours/Week			Exam Duration		Relative Weight (%)						
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Semester-I (Autumn)														
1.	WRN-503	Water Resources Planning and Management	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	WRN-507	Drinking-Water and Sanitation Sustainability	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	WRN-509	Water Sanitation, Hygiene and Infrastructural Management	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	WRN-516	Rural and Urban Water Supply	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.		Program Elective-I	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		20										
Semester-II (Spring)														
1.	WRN-506	Mini Project on Drinking Water and Sanitation	PCC	2	-	-	4	-	3	-	50	-	-	50
2.	WRN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
3.		Program Elective-II	PEC	4	-	-	-	-	-	-	-	-	-	-
4.		Program Elective-III	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Program Elective-IV	PEC	4	-	-	-	-	-	-	-	-	-	-
6.		Program Elective-V	PEC	4										
		Total		20										



**DEPARTMENT OF WATER RESOURCES DEVELOPMENT AND MANAGEMENT  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XXX M.Tech. (Drinking Water and Sanitation)**  
 Department: **WR Department of Water Resources Development and Management**  
 Year: **II**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	EFE	PRE
Semester-I (Autumn)														
1.	WRN-701A	Thesis Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.														
Semester-II (Spring)														
1.	WRN-701B	Thesis Stage-II (continued from III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

Summary					
<b>Semester</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Semester-wise Total Credits</b>	20	20	12	18	
<b>Total Credits</b>	<b>70</b>				

**Program Elective Courses for M.Tech. (Drinking Water and Sanitation)**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	EFE	PRE
1.	WRN-501	System Design Techniques	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	WRN-580	Renewable Energy System Technology	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	WRN-581	Water Quality Monitoring and Modeling	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	WRN-586	Groundwater Development and Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	WRN-587	Watershed Development and Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
6.	WRN-588	Remote Sensing and GIS Applications in Water Systems	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
7.	WRN-589	Drinking-Water for Low-Income Societies	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
8.	WRN-590	Wastewater and Fecal Sludge Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
9.	WRN-591	Resilience, Shocks and Emergencies	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
10.	WRN-592	Management and Operation of Water Utilities	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
11.	WRN-593	Water Works Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
12.	WRN-594	Flow Hydraulics and Urban Drainage	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
13.	WRN-595	Circular Water Economy	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
14.	WRN-596	Sustainable Water Resources	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-

**M.Tech. Drinking Water and Sanitation (DWS) Programme**  
**Seat Matrix, MEQ and Admission Process**

**Seat Matrix:**

Academic Department/ Centre & (Code)	Academic Programmes		Main Gate Discipline(s)	Categories				Other GATE Disciplines	Categories				EWS 10%	PD 5%	Spl. Wise Intake
				UR	OBC	SC	ST		UR	OBC	SC	ST			
Water Resources Development and Management (WRD)	M.Tech. Drinking Water and Sanitation	45	CE/AG/ES/AR/CH/ME(10)	4	3	1	1	-	-	-	-	-	1	-	10

**Minimum Eligibility Criteria:**

Candidates belonging to General, GEN-EWS and OBC category must have secured at least 60% marks or CGPA of 6.00 on a 10-point scale at the qualifying degree level; Candidates belonging to SC/ST/PD category, must have secured 55% or 5.50 CGPA on a 10-point scale. The marks awarded for the qualifying degree will be considered for eligibility.

**Minimum Educational Qualification:** Bachelor's degree in Engineering in any one of the following - Civil / Environmental/ Mechanical/ Agricultural/Chemical/ B.Arch. and Planning or equivalent.

**Eligible GATE Disciplines:** Civil Engineering (CE); Agricultural Engineering (AG); Environmental Science and Engineering (ES); Architecture and Planning (AR); Chemical Engineering (CH); Mechanical Engineering (ME).

**Note:**

- A few candidates can be admitted under QIP.

**International Candidates:** The international students can apply through ITEC/ICCSR/ASEAN or other MEA portals through Indian Embassies in respective countries. Such students can apply through the International Relations Portal of IIT Roorkee <https://ir.iitr.ac.in/HowToApply>

**Sponsored candidates (Full-time & Part-Time):** In line with other M.Tech. programmes of the Institute.

**Note:** The candidates working in Institute /University awarding a PG degree itself are not eligible for admission as Part-Time or Full-Time candidates if facilities are not available except QIP Candidates.

**Item No. 90.12: To consider the proposed seat matrices for the following programmes for admissions in the Academic Year 2022-2023:**

- 1. M.Tech./M.Arch./MURP programmes (Appendix-A)**
- 2. M.Sc. programme through JAM 2022 (Appendix-B)**

The IAPC, in its 117<sup>th</sup> meeting held on 23.02.2022, recommended the intakes for admission into various programmes for the academic session 2022-23. The category wise distributions of the seats are placed at Appendix – A and B.

The above is submitted for the consideration and approval of the Senate.

**Proposed Seat Matrix for M.Tech./M.Arch./MURP Admission 2022-23**

S.No	Academic Department/ Centre & (Code)	Academic Programmes		Main Gate Discipline(s)					Other GATE Disciplines					EWS 10%	PD 5% horizontal	Spl. Wise intake	Total seats in Dept/Centre
		Name	Code	GATE Discipline Code	UR	OBC	SC	ST	GATE Discipline Code	UR	OBC	SC	ST				
1	Architecture and Planning (ARD)	M.Arch.	10	AR(12)	5	4	2	1	-	-	-	-	-	1	1	13	26
		M.U.R.P.	11	AR(10)	4	3	2	1	CE(2)	1	1	0	0	1		13	
2	Hydro and Renewable Energy (HRE)	M.Tech. Renewable and Hydro Energy	12	CE(2)	1	1	0	0	AG/CH/EE/EC/ME/PI/XE/IN (12)	6	3	2	1	2	1	16	27
		M.Tech. Environmental Management of Rivers and Lakes	13	CE(3)	1	1	1	0	AG/CH/EE/ME/PI/XE/AR/CY/BT/PH/MA/XL/EY/ES(7)	3	2	1	1	1		11	
3	Chemical Engineering (CHD)	M.Tech. Chemical Engineering	14	CH(19)	8	6	3	2	-	-	-	-	-	2	1	21	21
4	Civil Engineering (CED)	M.Tech. Environmental Engg.	16	CE(10)	4	3	2	1	CH(2)	1	1	0	0	1	5	13	91
		M.Tech. Geospatial Engg.*	17	CE/GE(9)	4	3	1	1	AR/CS/EC/EE /AG/MN(4)	2	1	1	0	1		14	
		M.Tech. Geotechnical Engg.	18	CE(12)	6	3	2	1	MN (2)	1	1	-	-	2		16	
		M.Tech. Hydraulic Engg.	19	CE(11)	5	3	2	1		-	-	-	-	1		12	
		M.Tech. Structural Engg	20	CE(21)	9	6	4	2	-	-	-	-	-	2		23	
		M.Tech. Transportation Engg.	21	CE(12)	6	3	2	1	-	-	-	-	-	1		13	
5	Earthquake Engineering (EQD)	M.Tech. Soil Dynamics	22	CE(11)	5	3	2	1	-	-	-	-	-	1	2	12	41
		M.Tech. Structural Dynamics	23	CE(17)	8	5	3	1	-	-	-	-	-	2		19	
		M.Tech. Seismic Vulnerability and Risk Assessment	24	CE(9)	4	3	1	1	-	-	-	-	-	1		10	
6	Electrical Engineering (EED)	M.Tech. Electric Drives & Power Electronics	25	EE(13)	6	4	2	1	-	-	-	-	-	2	4	15	75
		M.Tech. Instrumentation and Signal Processing	26	EE(9)	4	3	1	1	EC/IN(4)	2	1	1	0	2		15	
		M.Tech. Power System Engg.	27	EE(13)	6	4	2	1	-	-	-	-	-	2		15	
		M.Tech. Systems and Control	28	EE(10)	4	3	2	1	EC/IN(3)	1	1	1	0	2		15	
		M.Tech. Electric Vehicle Technology	56	EE(15)	6	4	2	1	-	-	-	-	-	2		15	
7	Electronics and Communication Engineering (ECD)	M.Tech. Communication Systems	29	EC(11)	5	3	2	1	-	-	-	-	-	1	2	12	34
		M.Tech. R.F. & Microwave Engg	30	EC(10)	5	3	1	1	-	-	-	-	-	1		11	
		M.Tech. Microelectronics and VLSI	31	EC/PH(10)	4	3	2	1	-	-	-	-	-	1		11	
8	Computer Science and Engineering (CSD)	M.Tech. Computer Science & Engg	32	CS(29)	13	9	5	2	-	-	-	-	-	3	2	32	32
9	Hydrology (HYD)	M.Tech. Hydrology	33	CE/AG(17)	8	5	3	1	GG/XE/PH/ EY(3)	1	1	0	1	2	1	22	22
10	Mechanical and Industrial Engineering (MED)	M.Tech. CAD, CAM & Robotics	34	ME/PI(13)	5	4	2	1	-	-	-	-	-	1	4	13	70
		M.Tech. Machine Design Engg.	35	ME/PI(14)	6	4	2	1	-	-	-	-	-	1		14	
		M.Tech. Production & Industrial Systems Engg.	36	ME/PI(15)	6	4	2	1	-	-	-	-	-	2		15	
		M.Tech. Thermal Engg.	37	ME/PI(15)	6	4	2	1	-	-	-	-	-	2		15	
		M.Tech. Additive & Joining Technologies	38	ME/PI(13)	5	4	2	1	-	-	-	-	-	1		13	
11	Metallurgical and Materials Engineering (MTD)	M.Tech. Industrial Metallurgy	39	MT(3)	2	1	0	0	ME/PI/XE (7)	3	2	1	1	1	1	11	23
		M.Tech. Materials Engg.	40	MT(4)	2	1	1	0	PH/ME/PI/CY/XE (7)	3	2	1	1	1		12	
12	Paper Technology Saharanpur Campus (PPD)	M.Tech. Pulp & Paper	41	CH(7)	3	2	1	1	ME/BT/TF/EY (5)	2	2	1	0	1	1	13	26
		M.Tech Packaging Technology	42	CH(6)	2	2	1	1	BT/CY/ME/TF (6)	3	2	1	0	1		13	
13	Water Resources Development and Management (WRD)	M.Tech. Irrigation Water Management	43	CE/AG(7)	3	2	1	1	-	-	-	-	-	1	2	8	31
		M.Tech. Water Resources Development	44	CE/EE/ME (12)	5	4	2	1	-	-	-	-	-	1		13	
		M.Tech. Drinking Water and Sanitation	45	CE/AG/ES/AR/CH/ME(10)	4	3	1	1	-					1		10	
14	Physics (PHD)	M.Tech. Solid State Electronic Materials	46	PH(7)	3	2	1	1	EE/EC/MT (3)	1	1	1	0	1	1	11	22
		M.Tech. Photonics	47	PH(7)	3	2	1	1	EE/EC/MT/IN (3)	1	1	1	0	1		11	
15	Nanotechnology (NTC)	M.Tech. Nanotechnology	48	MT/ME/EC/CH/BT/ CE (4)	2	1	1	0	CY/PH/XL (6)	2	2	1	1	1	1	11	11
16	Disaster Mitigation and Management (DMC)	M.Tech. Disaster Mitigation and Management	49	CE(5)	2	1	1	1	ME/PI/CS/CH/AR/GG/PH/MA/XL/XE/EY/ BT (5)	2	2	1	0	1	1	11	11
17	Transportation Systems (TSC)	M.Tech. Infrastructure Systems	50	CE(3)	1	1	1	0	ME/PI/CH/EE/EC/CS/ AR (7)	3	2	1	1	1	1	11	11
18	Biosciences and Bioengineering (BBD)	M.Tech. Bioprocess Engineering	51	CH (4)	2	1	1	0	BT/AG/XE/TF (6)	2	2	1	1	1	1	11	11
19	Polymer and Process Engg	M.Tech. Polymer Science and Engg	52	CH/XE(12)	5	4	2	1	CY/ME/PE/PI/TF (8)	4	2	1	1	2	1	22	22
20	Mehta Family School of Data Science and Artificial Intelligence (MFS)	M.Tech. Artificial Intelligence	53	CS/EC/EE (13)	6	4	2	1	AE/AG/AR/BM/BT/CE/CH/CY/ES/EY/GG /IN/MA/ME/MN/MT/PE/PH/PI/ST/TF/XE/ XH/XL (5)	2	1	1	1	2	1	20	40
		M.Tech Data Science	54	AE/AG/AR/BM/BT/CE/CH/CS/CY/EC/EE /ES/EY/GG/IN/MA/ME/MN/MT/PE/PH/PI/ ST/TF/XE/XH/XL(20)	8	5	3	2	-	-	-	-	-	2	1	20	
21	International Centre of Dams (ICD)	M.Tech Dam Safety and Rehabilitation	55	CE (8)	3	2	1	1	-	-	-	-	-	1	1	8	8
		Total			215	146	80	43		46	33	18	10	64	36	655	655

\* Subject to approval of the Senate

Proposed Seat Matrix for M.Sc. Admission through JAM 2022

S.No	Deptt	Programme	Code	Paper code	Gen (Non-PwD)	Gen (PwD)	EWS(Non-PwD)	EWS (PwD)	OBC (Non-PwD)	OBC (PwD)	SC (Non-PwD)	SC (PwD)	ST (Non-PwD)	ST (PwD)	Total
1	Earth Sciences	M.Sc. Applied Geology	1801	GG	8	0	1	1	5	0	3	0	1	0	19
2	Chemistry	M.Sc. Chemistry	1802	CY	18	0	3	1	12	0	6	1	3	0	44
3	Humanities and Social Sciences	M.Sc. Economics	1803	EN	12	1	3	0	8	1	5	0	3	0	33
4	Mathematics	M.Sc. Mathematics	1804	MA	14	1	4	0	9	1	6	0	3	0	38
5	Physics	M.Sc. Physics	1805	PH	12	0	2	1	9	0	3	1	2	0	30

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 (164)

**Item No. 90.13: To consider the proposal to start a new fellowship in Ph. D. programme – “IITR@175 Fellowship”.**

There was an initiative for Creation of research capacity by engaging with higher education institutes around IIT Roorkee under the aegis of 175 years celebration of IIT Roorkee. Under the initiative, a committee, with Prof. Sanjeev Manhas as the Convener, prepared a few schemes. The Committee also proposed to start a new fellowship in Ph. D. programme named as “IITR@175 Fellowship” in order to contribute towards building research capacities in the organisations in and around Roorkee.

The 53<sup>rd</sup> IRC, in its meeting held on 28.01.2022, recommended the proposal as follows:

**The Fellowship:**

- “IITR@175 Fellowship” is afor In-Service Special External Research Scholars (ISSERS) for admission in full time Ph. D. program.
- The Fellowship shall be open to faculty members/scientists/engineers of AICTE/UGC recognized academic institutions or Government funded research organizations who get admission in the full time PhD program of the Institute in the academic years 2022-23, 2023-24 or 2024-25.
- All such academic institutions/research organisations must be located in the states of (i) Uttarakhand, or (ii) within 200 KM from IIT Roorkee in UP, Haryana, Punjab, Himachal Pradesh, and UT of Chandigarh.
- The Ph. D. admission in this category will be a full time as per the rules of IIT Roorkee and there shall not be any relaxation in residency requirements.
- Applications will be invited through the regular advertisement under ISSERS category.

**Eligibility Criteria:**

- Master's degree with minimum Cumulative Grade Point Average (CGPA) of 6.0 on a 10-point scale, or 60% marks for the General, GEN-EWS and OBC category.
- For SC/ ST or PWD candidates, the minimum CGPA requirements may be relaxed to 5.50 on a 10-point scale or to 55% marks.
- The requirement of GATE / GPAT / JRF / NET score (marks) shall not be applicable to the candidates.
- Experience: minimum two years in the parent organization at the time of registration.
- Seats: Seats will be over and above from the sanctioned intake.
- Maximum of two candidates under this scheme from one institute in an academic year will be eligible. It was further recommended that the total number of fellowships will be limited to two hundred in three years and shall not exceed seventy in a year.
- Such candidates should be recommended by the parent organization through proper channel; No Objection Certificate (NOC) needs to be produced at the time of application.
- In case of a greater number of eligible applications from one institute, offer will be given to the candidates having higher experience in the parent organization.
- Department wise minimum academic educational qualification will be applicable as specified from time to time.

The above is submitted for the consideration and approval of the Senate.



**Item No. 90.14: To consider revision in Minimum Educational Qualification (MEQ) for admission into the Ph.D. programme in Water Resources Development & Management Department.**

The 54<sup>th</sup> IRC, in its meeting held on 02.03.2022, recommended the MEQ for admission into the Ph.D. programme in Water Resources Development & Management Department as follows:

Existing MEQ	Recommended MEQ
(i) B.E. /B. Tech. /M.E. /M.Tech. in Civil, Environment/ Electrical, Mechanical /Agricultural or equivalent degree. (ii) M.Sc. Degree in Agricultural/ <b>Biological</b> / Environmental / Natural / <b>Social Sciences</b> / Environmental Planning or equivalent consistent with research areas of the department.	(i) B.E. /B. Tech. /M.E. /M.Tech. in Civil /Agricultural / Environment / Electrical/ Mechanical / <b>Chemical</b> / Computer/ Electronics Engineering / <b>Architecture and Planning</b> or equivalent degree consistent with research areas of the Department.  (ii) M.Sc. Degree in Agricultural Science/ Natural <b>(Land and Water)</b> Science / Environmental Science or equivalent consistent with research areas of the Department <b>along with mathematics at bachelor's level.</b>

The above is submitted for the consideration and approval of the Senate.

**Item No. 90.15: To consider a proposal to allow Ph.D. students to submit Ph.D. thesis on the basis of Technology Commercialisation/ Patent granted/ Founding of Start-up in absence of required publications. (Item No.: 54.2.2, 54<sup>th</sup> IRC dt: 02.03.2022)**

Currently, when the research work of a Ph.D. student is complete, and s/he earns at least 24 units S thesis grades, the SRC examines the her/him before recommending submission of the thesis. At this stage, it is expected that the student has already published (or, accepted for publication) at least two papers out of which at least one paper should be in a peer reviewed journal of repute, or in some select disciplines, it could be in the proceedings of an international conference of repute as endorsed by the SRC. If the SRC deems fit, it may recommend submission of thesis even in the absence of required publications. However, such cases shall be reported to the Senate.

The ADII has submitted a proposal **(Appendix-A)** requesting to allow a Ph.D. student to submit her/his Ph.D. thesis on the basis of Patent granted/ Technology Commercialisation/ Founding of Start-up in absence of the required publications.

The 54<sup>th</sup> IRC, held on March 02, 2022, considered the proposal. It is informed that the opinions of all Departments/ Centres/ School were also considered.

The IRC recommended the proposal as follows:

- (a) If a patent is filed during the Ph. D. programme, which is commercialized through technology transfer (as per IIT Roorkee policy), it should be considered equivalent to the paper publication requirement.
- (b) If a patent is granted during the Ph. D. programme, it should be considered equivalent to a published paper.
- (c) If a researcher starts a scientific spin-off which is incubated at IIT Roorkee, s/he can take benefit of this start-up towards completion of Ph. D. requirements in following way:

The founder, through his/her SRC, will propose a committee to Dean SRIC for consideration through ADII consisting of SRC and two experts. The Committee, as approved by the Dean, SRIC, will consider and submit its recommendations on submission of the Ph. D. thesis without research paper publication. The Dean, SRIC will consider the report of this committee on equivalence of research paper publications. The recommendations of the Dean SRIC will be sent to DoAA for consideration.

The above is submitted for the consideration and approval of the Senate.

**Dean, Academic Affairs**

Sub: Proposal for encouraging innovation and Startups in PhD programme

It is desirable that research students should explore not only theoretical research but application oriented researches also. As innovation eco system at IIT Roorkee is developing and there is emphasis to bring lab research to product development and commercialisation, it is proposed that following enabling provisions should be included in PhD regulations of the institute:

**Present Conditions for Thesis submission (as per R 6.2 of guidelines)**

The supervisor(s) shall convene a meeting of the SRC when the research work is complete, the student has earned at least 24 units S thesis grades and a draft of the thesis is ready. At this stage, **it is expected that the student has already published (or, accepted for publication) at least two papers out of which at least one paper should be in a peer reviewed journal of repute, or in some select disciplines it could be in the proceedings of an international conference of repute as endorsed by the SRC.** If the SRC deems fit, it may recommend submission of thesis even in the absence of required publications. However, such cases shall be reported to the Senate.

To enable innovations in terms of patenting, technology commercialization and start ups, following points should be included in above underlined conditions:

- (1) If a patent is filed during the PhD programme which is commercialized through technology transfer, it should be considered equivalent to the paper publication requirement. The minimum license fee to be charged for such technology transfer will be Rs10 lakh.
- (2) If a patent is granted during the research, it should be considered equivalent to a published paper.
- (3) If a researcher starts a scientific spin off which is incubated at IIT Roorkee, he/she can take benefit of this start up towards completion of PhD requirements in following way: Founder through his/her SRC will approach ADII for evaluation of startup to be considered in lieu of publications. ADII will propose a committee consisting of SRC, and two experts to recommend submission of thesis without paper publication. Founder will suggest a panel of five experts. The committee will be approved by Dean SRIC and report of the committee will also be approved by Dean SRIC.

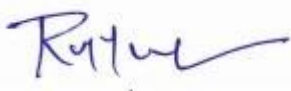
(Note (a) Startup should be incubated/ supported at TIDES/ TIH.

(b) Patent should be filed as per Institute IPR policy.

(c) Technology Transfer should be as per Institute IPR policy.)

You are requested to consider the proposal to give boost to startup culture at IIT Roorkee .

Sincerely



Rajat Agrawal

ADII & Coordinator- IPR Cell

**Item No. 90.16: To consider the mercy appeal of the following ex-Ph. D. Students for reinstatement of their academic registration:**

1. Himanshu Singh (16923008)
2. Manohare Manish Purushottam (17511008)
3. Ekta (16903017)
4. Rajni Modi (15913012)
5. Meenal Gupta (20916013)
6. Ajay Kumar (16919002)
7. SHUBHAM BAJPAI (18922005)
8. VIMAL KANT MISHRA (19905003) IIC
9. ROUCHIN MAHENDRA (16905002) IIC
10. Rubi Sharma (18925039) Physics

The last date of registration with late fine for the Spring 2021-2022 semester was January 13, 2022. The names of the defaulting students were later struck off. However, the students may submit Mercy Appeal through their proper channel for reinstatement of their names.

The status of submission of Mercy Appeal and other details of the above ex-students are as follows:

<b>Sr. No</b>	<b>Name and En.No.</b>	<b>Department</b>	<b>Mercy request submitted by the student through proper channel</b>
1	Himanshu Singh (16923008)	Applied Science and Engineering	Yes, through proper channel
2	Manohare Manish Purushottam (17511008)	Architecture and Planning	Yes, through proper channel
3	Ekta (16903017)	Biotechnology	Yes, through proper channel
4	Rajni Modi (15913012)	Earthquake Engg.	Yes, but not through proper channel (only through Supervisor)
5	Meenal Gupta (20916013)	Humanities and Social Sciences	Yes, through proper channel.
6	Ajay Kumar (16919002)	Mathematics	Yes, but not through proper channel (only through Supervisor)
7	SHUBHAM BAJPAI (18922005)	Paper Technology	Yes, through proper channel
8	VIMAL KANT MISHRA (19905003)	IIC	Yes, through proper channel
9	ROUCHIN MAHENDRA (16905002)	IIC	Yes, through proper channel

10	Rubi Sharma (18925039)	Physics	Yes, but not through proper channel (directly through email by the student)
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The 54<sup>th</sup> IRC, held on March 02, 2022, recommended the reinstatement of academic registration of the above ex-Ph. D. students except the student mentioned at Sr. No. 10.

The above is submitted for the consideration and approval of the Senate.

**Item No. 90.17: To consider the provisional academic registrations of the following Ph. D. students, due to non-submission of mandatory documents:**

- (a) Mr. Suman Sourav Mohanty (En.No.: 21916073), Ph.D. student, Deptt. of Humanities and Social Sciences.**
- (b) Mr. Laxman Singh Khangarot (En.No.: 21911018), Ph.D. student, Deptt. of Electronics and Communication Engg.**

- (a) The Case of Mr. Suman Sourav Mohanty:

On the recommendation of 53<sup>rd</sup> IRC held on 28.01.2022, Mr. Suman Sourav Mohanty was advised to submit mandatory documents, i.e. NOC and Experience Certificate from his parent Department, upto 18<sup>th</sup> February, 2022.

Mr. Suman Sourav Mohanty has submitted the documents which are not as per the requirement/format (**Appendix-A**).

It appears from the submitted documents that the Government has not relieved him for the period of the program requirement. The course-work period requires full-time involvement of the candidate. The Government has allowed him for distance/online mode only.

The 54<sup>th</sup> IRC did not recommend his request and recommended to strike-off his name.

- (b) The Case of Mr. Laxman Singh Khangarot:

Mr. Laxman Singh Khangarot (Enrol. No. 21911018) was provisionally admitted in Ph.D. programme on 18.01.2022 under QIP scheme in the Department of Electronics & Computer Engineering. He was nominated by Bikaner Technical University, Bikaner (University College of Engineering & Technology, Bikaner.) for the Autumn Semester, 2021-22. He is required to submit the following documents:

- i. Sponsorship-cum-No Objection Certificate as per the format of IIT Roorkee – issued recently by the competent authority of his parent organization.
- ii. Unconditional Relieving Certificate on IITR prescribed format.

Instead of submitting the above two documents, he has given the following undertaking:

“I am giving undertaking to provide required documents as soon as possible or before 28/03/2022. If I fail to provide documents, I will accept any decision made by Academic /QIP section, IIT Roorkee”

Laxman Singh Khangarot is an alumnus of IIT Roorkee (M. Tech. 2013-15). He has completed 60 days of contact period successfully under the QIP scheme of the MoE.

He has also informed that his matter of relieving from his parent organisation is under judiciary.

The 53<sup>rd</sup> IRC recommended the request of Mr. Laxman Singh Khangarot (21911018), and provided him extension to submit the mandatory documents upto February 18, 2022.

Principal, UCET, Bikenar, sent a letter (Ref No:UCET/PS/2021-22/1289, dated 28.2.2022 **(Appendix-B)**) to the Director, IIT Roorkee regarding joining report of Mr. Laxman Singh Khangarot.

The 54<sup>th</sup> IRC recommended the request of Mr. Laxman Singh Khangarot (En.No.: 21911018) for submission of mandatory documents up to 28.03.2022 failing which his provisional academic registration will be cancelled. The IRC further suggested that the same be informed to the Principal of the college.

Mr. Laxman Singh Khangarot has sent a ‘Sponsorship cum Relieving Certificate’ on March 03, 2022 **(Appendix-C)**.

The above are submitted for the consideration of the Senate.



Government of West Bengal  
Personnel & Administrative Reforms Department, IAS Cell  
Nabanna, 325, Sarat Chatterjee Road, Howrah-711102

No. 235- PAR(IAS) 7P-17/18.

Dated, the 15<sup>th</sup> February, 2022.

From : Shri Trinanjan Chakraborty.  
OSD & EO Additional Secretary.

To : The Additional Chief Secretary to the Govt. of West Bengal.  
Forest Deptt.

Sir,

I am directed to refer to your proposal in e-office file in the matter of grant of NOC in favour of Shri Suman Sourav Mohanty, IAS (WB:2017), Joint Secretary, Forest Deptt. for pursuing Ph.D at IIT Roorkee in distance / Online mood and to state that State Government has no objection to allow Shri Suman Sourav Mohanty, IAS (WB:2017), Joint Secretary, Forest Deptt. for pursuing Ph.D at IIT Roorkee in distance / Online mood subject to the condition that his due discharge of duties shall not be hampered by any means and he will have to take leave at his own credit with prior approval of the Government, if required.

Yours faithfully,

Sd/-  
( Shri Trinanjan Chakraborty)  
O.S.D. & E.O Additional Secretary  
to the Government of West Bengal.

No.235/1 PAR(IAS) 7P-17/18.

Dated, the 15<sup>th</sup> February, 2022 ,

Copy forwarded for information to Shri Suman Sourav Mohanty, IAS , Joint Secretary, Forest Deptt.

( Shri Trinanjan Chakraborty)  
O.S.D. & E.O Additional Secretary  
to the Government of West Bengal.

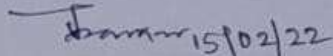
Government of West Bengal  
Department of Forests  
Aranya Bhavan, Salt Lake, Block - LA - 10A  
Sector-III, Kolkata - 106

No. 168-FOR

Dated, Kolkata the 15<sup>th</sup> February, 2022.

Service Verification Certificate

Certified that Services of Shri Suman Sourav Mohanty, IAS, Joint Secretary of this Department for the period from 01/08/2021 to 31/01/2022 have been verified with reference to Pay Bill & Acquittance Rolls and from official records.

  
Assistant Secretary (D.D.O.)  
Department of Forests  
Govt. of West Bengal  
Asstt. Secretary (D.D.O.)  
Department of Forests  
Govt. of West Bengal

Zimbra

**URGENT:::Fwd: Regarding joining report of Mr. Laxman Singh Khangarot**

**From :** Dean AcademicAffairs <daa@iitr.ac.in>  
**Subject :** URGENT:::Fwd: Regarding joining report of Mr. Laxman Singh Khangarot  
**To :** Assit RegistrarEvaluation <arevaluation@iitr.ac.in>  
**Cc :** Assoc Dean of Academic Affairs - Evaluation <adaa-evaluation@iitr.ac.in>

Tue, Mar 01, 2022 06:48 PM

📎 1 attachment

FNA - please.

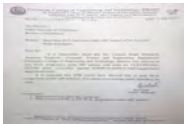
-Apurbba

Prof. Apurbba Kumar Sharma, Ph D, FIE / प्रो. अपूर्बा कुमार शर्मा, पीएचडी, एफआईई  
Dean of Academic Affairs / कुलशासक शैक्षणिक अफेयर्स  
Indian Institute of Technology Roorkee / भारतीय प्रौद्योगिकी संस्थान रुड़की  
ROORKEE - 247 667, Uttarakhand, India / रुड़की -247667, उत्तराखण्ड, भारत  
Phone - (+91 / 01332) 28 5255 / 5421 (O), 5479 (R), 9411100286 (M)  
E-mail / ई-मेल : daa@iitr.ac.in, aks@me.iitr.ac.in  
[Webpage / वेबपेज](#)  
[Office Webpage / ऑफिस वेबपेज](#)

**From:** "PA to Principal UCET" <pa.principal@cet-gov.ac.in>  
**To:** "Director IITRoorkee" <director@iitr.ac.in>, "Dean AcademicAffairs" <daa@iitr.ac.in>, "qip iitr" <qip.iitr@gmail.com>, qip@iitr.ac.in  
**Cc:** "Principal UCET" <principal@cet-gov.ac.in>  
**Sent:** Monday, February 28, 2022 4:59:03 PM  
**Subject:** Regarding joining report of Mr. Laxman Singh Khangarot

Dear Sir,

It is respectfully stated that Mr. Laxman Singh Khangarot, Asst. prof., CSE, dept, UCET has been relieved to join the Ph.D. programme under QIP. Kindly send his joining report at the earliest.



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6 MB





University College of Engineering and Technology, Bikaner  
(Constituent College of Bikaner Technical University, Bikaner)  
(Aligning with 21<sup>st</sup> Century: The Century of Consciousness)  
(Established by the Govt. Act 29 of 2017)



Ref No: - UCET/PS/2021-22/1289

Date: 28/02/22

The Director,  
Indian Institute of Technology,  
Roorkee, Uttarakhand.

Subject: - Regarding Ph.D. admission under QIP scheme of Mr. Laxman  
Singh Khangarot.

Dear Sir,

It is respectfully stated that Mr. Laxman Singh Khangrot, Assistant Professor, Computer Science and Engineering Department, University College of Engineering and Technology, Bikaner was relieved to join Ph.D. programme under QIP scheme vide order no. UCET/PS/2021-22/1169 dated 15/12/2021 against IITR/Ph.D-ADM-21/QIP/Appld/50505 dated 08/07/2021.

It is expected that IITR would have allowed him to join Ph.D. programme (under QIP scheme), if so please send joining report regarding the same.

Principal  
UCET, Bikaner

Enclosure:-

1. Sponsorship cum relieving certificate.
2. Offer Letter of IITR, to join Ph.D. programme under QIP scheme.



University College of Engineering and Technology, Bikaner  
(Constituent College of Bikaner Technical University, Bikaner)  
(Aligning with 21<sup>st</sup> Century: The Century of Consciousness)  
(Established by the Govt. Act 29 of 2017)



Ref No UCET/PS/ 2021-22/ 1290

Date: 03/03/2022

## **SPONSORSHIP CUM RELIEVING CERTIFICATE**

(Issued in compliance of order in civil writ petition no. 17236/2021)

This is to certify that Mr. Laxman Singh Khangarot of Department of Computer Science and Engineering is hereby relieved with effect from 03.03.2022 to join Ph.D. programme under Q.I.P. at Department of Computer Science and Engineering, IIT, Roorkee for a period of 03 (three) years.

During the above said period of his/her will be treated on deputation and he/she will be paid his/her normal salary alongwith admissible allowances in full.

Mr. Laxman Singh Khangarot has to execute a bond to serve this college for a period of 05 (Five) years upon completion of his/her programme of study.

The relieving is provisional and subject to final decision of above said writ petition and decision of Board of Management (BoM) of the Bikaner Technical University, Bikaner.

Signature of Head of the Institution  
(Principal)

प्राचार्य  
विश्वविद्यालय अभियांत्रिकी एवं  
(Office Seal) प्रौद्योगिकी महाविद्यालय, बीकानेर

To be submitted to:

Coordinator  
Quality Improvement Programme  
Continuing Education Centre  
Indian Institute of Technology Roorkee  
ROORKEE



**HIGH COURT OF JUDICATURE FOR RAJASTHAN**

**AT JODHPUR**

S.B. Civil Writ Petition No. 17236/2021

Laxman Singh Khangarot S/o Shri Raghuveer Singh, aged about 37 Years, R/o B-391, Karni Nagar, Lalgah, Bikaner.

-----Petitioner

Versus

1. The State of Rajasthan through the Secretary, Department of Education, Secretariat, Jaipur.
2. Bikaner Technical University, Bikaner through its Registrar.
3. The Principal, College of Engineering and Technology, Bikaner, Rajasthan.

-----Respondents

For Petitioner(s) : Mr. Prathvi Raj Singh Jodha.

**HON'BLE MR. JUSTICE ARUN BHANSALI**

Order



**14/12/2021**



Heard.

It is submitted by the counsel for the petitioner that after seeking due permission from the respondents, the petitioner has been granted admission under the QIP at I.I.T Roorki. The respondent College required the grant of extension to the petitioner for one Semester, which was granted by the I.I.T. and now the Programme is going to start from 18.12.2021, however, the requisite Sponsorship-cum-Relieving Certificate and Recognition Certificate (part of Annex.5) have not been issued by the respondent competent authority, which would result in

**14 DEC 2021**



petitioner losing the admission, which has been granted to him as indicated in Annex.12.

In view of submissions made, issue notice. Issue notice of stay petition as well.

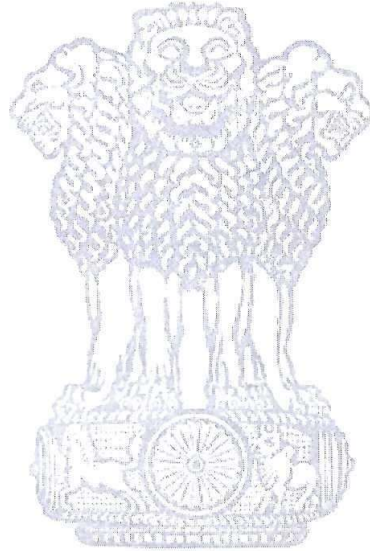
In the meanwhile, the respondents No.2 and 3 are directed to issue the requisite Sponsorship-cum-Relieving Certificate and/or any further requirement to the petitioner required for joining the Ph. D. Programme at I.I.T. Roorki by 16.12.2021.

**(ARUN BHANSALI),J**

114-DJ/-



14 DEC 2021



सत्यमेव जयते

*[Handwritten signature]*

**Item No. 90.18: To report the progress and status of the online M.Tech. (Microelectronics and VLSI) program for working industry professionals.**

The senate in its 86<sup>th</sup> meeting dated 09.02.21 recommended the proposal of the Department of Electronics and Communication Engineering to start an online M.Tech (Microelectronics and VLSI) for working industry professionals and decided that the progress and status of the programme be placed before the Senate after the next year admissions are over.

The M.Tech. (VLSI) programme for industry professionals was started with its first batch in 2021. The progress and status of this programme is placed at **(Appendix -A).**





# **Indian Institute of Technology Roorkee**

Website: [vlsimtech.iitr.ac.in](http://vlsimtech.iitr.ac.in) | Email: [vlsi-mtech@ece.iitr.ac.in](mailto:vlsi-mtech@ece.iitr.ac.in) | Phone No.: +91-1332-28 6415

## **M.Tech (VLSI) for Industry Professionals**

### **Background Note:**

- First Batch started in July 2021 (Autumn Semester)
- Total Seats offered: **20**
- Duration: **3 years**
- Eligibility: B.Tech (ECE/EE/EI) or equivalent, M.Sc (Physics/Electronics), with at least 60% marks or CGPA of 6.00 on a 10-point scale at the qualifying degree level and minimum two years of relevant experience in VLSI industry and/or research labs.
- Admission Process: Entrance test and/or online interview of the shortlisted candidates.
- Total Credits: **70**

### **Admission Details:**

Number of Students registered in 2021 batch: 20.

Out of 20, 4 students dropped due to some technical reasons. Students registered with strong backgrounds from different startups and industries like **Intel, ARM Embedded, Synopsys Semiconductor, Applied Materials, Micron, Qualcomm, Western Digital, Micron On-Chip** etc. with an experience of more than 5 to 6 years.

### **Mode of conducting classes, labs and exams:**

Weekend classes conducted through online mode only. We have provided recorded lectures to all students in case of unavailability during the sessions. Keeping in view of the occasional unpredictable nature of work in industry, we have relaxed the attendance for working professionals.

We have also invited expert industry professionals for teaching modules in the courses.

Taking the pandemic situation into account, we conducted the end-term exams through online mode for autumn semester.

We provide a 24 hours access of all EDA tools used in the lab courses.

**Contact Program:** We organized a contact program from Oct 30-31, 2021 at GNEC campus IIT Roorkee. The students had an interactive session with all faculty members teaching them and the PIC members. In current semester, we organized the contact program at IIT Roorkee campus from March 12-13, 2022. Each course instructor conducted a 90-minute session with the students. The students also got an opportunity to interact with all the MeV faculty and lab facilities. The students, therefore, would now find it easy to choose their supervisors for seminar and dissertation.



# Indian Institute of Technology Roorkee

Website: [vlsimtech.iitr.ac.in](http://vlsimtech.iitr.ac.in) | Email: [vlsi-mtech@ece.iitr.ac.in](mailto:vlsi-mtech@ece.iitr.ac.in) | Phone No.: +91-1332-28 6415

We are organizing a webinar on March 17, 2022 for our upcoming batch which will help the audience in clearing their doubts related to this program. Presently, we have received more than 100 registrations for the webinar.

Please see the feedback of students attached in the below link:

<https://drive.google.com/drive/folders/1a0mlHGGXumQcTkqkyBE23g3SVcOB-2FU?usp=sharing>

\*\*\*\*\*

**Item No. 90.19: To report the approvals accorded by the Chairman, Senate:**

**(a) Recommendations of 115<sup>th</sup>, 116<sup>th</sup> and 117<sup>th</sup> meetings of IAPC.**

1. Requests of students regarding one-year withdrawal, course drop/ change/ addition after the last date, re-enrollment in Thesis Stage-I and name restoration. (Item No.: 115.2.1, 115<sup>th</sup> IAPC dt: 12.01.2022)
2. Registration of B.Tech. (EE) final year students in the courses – EEN-303P and EEN-305P for Autumn Semester 2021-22. (Item No.: 115.2.6, 115<sup>th</sup> IAPC dt: 12.01.2022)
3. Proposals of Department of Physics to waive off PHN-700A: Industrial/ Lab Training for the students of M.Tech. (Photonics) and M.Tech. (SSEM) who are currently in second year. (Item No.: 115.2.7, 115<sup>th</sup> IAPC dt: 12.01.2022)
4. Shifting of practical courses of Department of Mechanical & Industrial Engineering from Autumn Sem 2021-22 to the Spring Sem 2021-22: (Item No.: 115.2.8, 115<sup>th</sup> IAPC dt: 12.01.2022)
  - a) MIN-205P - Fluid Mechanics
  - b) MIN-305P - Heat and Mass Transfer
5. Removal of course 'ARN-705: Professional Training' of Department of Architecture and Planning after the last date for the students of M. Arch (II Yr), registered during the Autumn Sem 2021-22. (Item No.: 115.2.10, 115<sup>th</sup> IAPC dt: 12.01.2022)
6. Request of Mr. Deepak Kumar Jain (Enr. No. 18519003), M.Tech. (CE), II Yr regarding name restoration. (Item No.: 115.2.11, 115<sup>th</sup> IAPC dt: 12.01.2022)
7. Request of Ms. Mamta Meena (Enr. No. 14115069), B.Tech. (EE), IV Yr to allow registration of BTP-I and

BTP-II in Spring Semester 2021-22. (Item No.: 115.3.2, 115<sup>th</sup> IAPC dt: 12.01.2022)

8. Proposal of Department of Design to introduce admission under sponsored category for M.Des. (Industrial Design) and MIM (Masters in Innovation Management). (Item No.: 115.3.3, 115<sup>th</sup> IAPC dt: 12.01.2022)
9. Requests of students regarding name restoration, one-year withdrawal and late registration and addition of course. (Item No.: 116.2.2, 116<sup>th</sup> IAPC dt: 02.02.2022)
10. The proposals of Department of Architecture and Planning regarding course ARN-213: Measured Drawing Camp for B.Arch. III Yr students: (Item No.: 116.2.5, 116<sup>th</sup> IAPC dt: 02.02.2022)
  - a) To replace 'F' grade with 'I' grade in Autumn Sem 2021-22.
  - b) To complete evaluation of ARN-213 during the Spring Semester 2021-22.
11. Requests of students regarding registration of external students for one year, change of course after the last date and name restoration. (Item No.: 116.2.9, 116<sup>th</sup> IAPC dt: 02.02.2022)
12. Eligibility criteria by the Department of Design for M.Des. (Industrial Design) and MIM (Masters in Innovation Management) for admission under sponsored category. (Item No.: 116.2.10, 116<sup>th</sup> IAPC dt: 02.02.2022)
13. Requests of students regarding name restoration, last date for addition/ change of course, name restoration and registration for Project stage I and II and conversion of course area from DHC to PEC. (Item No.: 117.2.4, 117<sup>th</sup> IAPC dt: 23.02.2022)
14. Proposal of Department of Electrical Engineering to de-register 'EEN-449 Training Seminar' for students who received "0" grade point. (Item No.: 117.2.6, 117<sup>th</sup> IAPC dt: 23.02.2022)

**(b) Recommendations of 52<sup>nd</sup> and 53<sup>rd</sup> meetings of IRC.**

- (1) The mercy appeals of ex-Ph.D. students, who have not submitted their fees for Autumn semester 2021-2022 within due time. (52<sup>nd</sup> IRC dt: 30.11.2021 and 53<sup>rd</sup> IRC dt: 28.01.2022) Items No.: 52.2.3 and 53.2.3 respectively.
- (2) The request of Mr. Vikas Surana (En.No.: 20909031), Ph.D. student, Deptt. of Chemistry, for allowing course addition after the Senate approved date i.e. 09.08.2021. (Item No.: 52.3.2, 52<sup>nd</sup> IRC dt: 30.11.2021)
- (3) The mercy appeal of Mr. Rajendranath Mondal (En. No.: 21919006), a provisionally registered Ph.D. student in the Department of Mathematics, to reinstate his academic registration. (Item No.: 53.2.2, 53<sup>rd</sup> IRC dt: 28.01.2022)
- (4) The following requests of the Ph.D. students for conversion of their status from Part Time to Full Time with Institute Assistantship.
  - A. Ms. Dolonchapa Prabhakar (En.No.: 19910005), CED
  - B. Ms. Priyanka Singh (En.No.: 19917003), HYD(Item No.: 53.2.5, 53<sup>rd</sup> IRC dt: 28.01.2022)
- (5) The requests of Ph.D. candidates for extension to submit mandatory documents w.e.t Ph.D. admission in spring 2021-2022.
  - A. Final CSIR-JRF arwad letter by CSIR fellows:
  - B. NoC and experience certificate from parent department
  - C. i. Sponsorship-cum-No Objection Certificate as per the format of IIT Roorkee- issued recently by the competent authority of his parent organization.

ii. Unconditional Relieving Certificate on  
IITR prescribed format  
(Item No.: 53.2.6, 53<sup>rd</sup> IRC dt: 28.01.2022)

- (6) The request of Ms. Shuchi Saumya (En.No.: 21910048), Ph.D. student, Deptt. of Civil Engg., to drop two courses after the Senate approved date i.e. November 05, 2021 for the Autumn semester 2021-2022. (Item No.: 53.2.7, 53<sup>rd</sup> IRC dt: 28.01.2022)
- (7) The requests of the following international Ph.D. candidates for deferment of their Ph.D. admission to Autumn semester 2022-2023.
- A. Ms. Bantika Jaruma (En.No.: 21916007), HSS
- B. i. Mr. Zewedu Wondimagegne Asfaw (En.No.: 21921021), MTD
- ii. Mr. Sirak Masresha telele (En.No.: 21920051), MIED
- (Item No.: 53.2.8, 53<sup>rd</sup> IRC dt: 28.01.2022)
- (8) The request of following Ph.D. students for approval for addition/ change of courses whose applications were received after the Senate approved date. (Item No.: 53.2.9, 53<sup>rd</sup> IRC dt: 28.01.2022)
- (9) A proposal of celebrating “Institute Research Day” every year on a fixed day. (Item No.: 53.2.10, 53<sup>rd</sup> IRC dt: 28.01.2022)

The above is reported to the Senate.

भारतीय प्रौद्योगिकी संस्थान रुड़की  
रुड़की – 247 667 (भारत)  
**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**  
**ROORKEE - 247 667 (INDIA)**



सीनेट की नब्बेवीं बैठक हेतु अनुपूरक कार्य सूची  
**SUPPLEMENTARY AGENDA FOR THE 90<sup>th</sup> MEETING**  
**OF THE SENATE**

बैठक सं०	:	नब्बेवीं
<b>MEETING NO.</b>	:	<b>90<sup>th</sup></b>
स्थान	:	सीनेट हॉल, भा० प्रौ० सं० रुड़की
<b>VENUE</b>	:	<b>Senate Hall, IIT Roorkee</b>
दिनांक	:	16 मार्च 2022
<b>DATE</b>	:	<b>16<sup>th</sup> March 2022</b>
समय	:	04.00 बजे अपरान्ह
<b>TIME</b>	:	<b>04.00 P.M.</b>

भारतीय प्रौद्योगिकी संस्थान रुड़की  
**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**  
रुड़की 247 667  
**ROORKEE – 247 667**



**अनुपूरक कार्यसूची / SUPPLEMENTARY AGENDA**

मुद्दा सं० / Item No.	विवरण / Particulars	पृष्ठ / Page(s)
90.20	शिक्षा मंत्रालय की स्टडी इन इंडिया योजना के तहत अंतर्राष्ट्रीय छात्रों की सीटों की ऊपरी सीमा यानी 60 (40 पीजी + 20 पीएचडी) को हटाने के सम्बन्ध में कुलशासक, इंटरनेशनल रिलेशन से प्राप्त प्रस्ताव पर विचार करना। To consider the proposal received from Dean, International Relation w.r.t. removing the upper limit on the seats i.e. 60 (40 PG + 20 Ph.D.) of International students under the “Study in India” scheme of the Ministry of Education.	66-67
90.21	नए अवार्ड/छात्रवृत्ति/पुरस्कार आदि पर अध्यक्ष सीनेट द्वारा दिए गए अनुमोदनों की रिपोर्ट करना। To report approvals accorded by the Chairman Senate on new awards/ scholarship/prizes etc.	68-69
अन्य मुद्दे अध्यक्ष की अनुमति से / Under any other item with the permission of the Chair.		



**Item No. 90.20: To consider the proposal received from Dean, International Relation w.r.t. removing the upper limit on the seats i.e. 60 (40 PG + 20 Ph.D.) of International students under the “Study in India” scheme of the Ministry of Education.**

The Senate in its 73<sup>rd</sup> meeting vide item no. 73.9 approved for admitting 60 foreign students (40 PG + 20 Ph.D.) through the “Study in India” (SII) scheme of the Ministry of Education (then MHRD) from the academic year 2018-19 onwards. Admissions offers are made accordingly.

It is formed that there is an increase in the applications for admission received by the institute through SII as given below **(Appendix – A)**:

Academic year	Applications Received	Admission Offered	Registered
Year 2020-2021	147	60	54
Year 2021-2022	373	79	47

Considering the increasing trend, it is proposed to remove the upper limit in offers in an academic year for admission of International students in the institute irrespective of the scheme and programme (Master/PhD). It is further proposed that the concerned departments/centres/school will decide the number of admission offers for their programme(s), based on the infrastructure w.e.f. the academic session 2022-2023. The final offers will be issued subject to the concurrence of DOSW and Dean, IR.

The above is submitted for the consideration of the Senate.

Zimbra

daa@iitr.ac.in

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**Proposal to define number of seats for International Students**

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**From :** dean ir <dean.ir@iitr.ac.in>

Tue, Mar 15, 2022 01:33 PM

**Subject :** Proposal to define number of seats for International Students**To :** 'Dean AcademicAffairs' <daa@iitr.ac.in>**Cc :** 'Assoc. Dean of Academic Affairs Admission' <adaa-admission@iitr.ac.in>**DAA**

Please refer to **Item No 73.9** extract of [AGENDA FOR THE 73rd MEETING OF THE SENATE; Dated 10th May 2018](#) and [MINUTES OF THE 73rd MEETING OF THE SENATE; Dated 10th May 2018](#). Accordingly, we are admitting 60 foreign students (40 PG + 20 Ph.D.) through the 'Study in India' program of the MHRD from the academic year (2018-19) onwards. We are expecting an increase in this number for the upcoming session, and hence suggest removing the constraint on the number of seats offered.

It is proposed that the heads of the departments/centres/school shall decide the number of offer letters to be sent for every programme, depending on the infrastructure requirements.

This shall be placed as a supplementary agenda in the upcoming Senate meeting.

Below is the status of the SII applications for Last Two Years

Year 2020-2021	Applications Received	Admission Offered	Registered
	147	60	54
Year 2021-2022	Applications Received	Admission Offered	Registered
	373	79	47

Best Regards,  
Arumugam  
Dean IR

---

**Item No. 90.21: To report approvals accorded by the Chairman Senate on new awards/ scholarship/prizes etc.**

- 1. Dr. S.K. Goel and Mrs. Kusum Goel Scholarship:** Dr. Surendra K. Goel, an alumnus of 1958 batch of B.E. (Civil Engineering), and his spouse Mrs. Kusum Goel have created a corpus to support four (04) full tuition fee waiver of Rs. 2.0 lakh each per year to financially constrained undergraduate students entering the Institute.
- 2. MECH 76 Alumni Award:** Alumni of 1976 batch of B.E. (Mechanical Engineering) have created a corpus to support two (02) cash prizes of Rs. 10,000/- each per year. These cash prizes will be awarded to two deserving students of B.Tech. (Mechanical Engineering) with the highest CGPA up to second and third year, respectively, provided the students are not the recipients of any other similar awards during that year.
- 3. New MCM Scholarships:**
  - i. 1957 Batch MCM Scholarship:** Alumni of 1957 batch have created a corpus to support one (01) MCM scholarship of Rs. 10,000/- per year. This scholarship will be given to a deserving student of B.Tech. programme of any year and any department. The awardee will be selected as per the prevailing procedure adopted by SCSP to award MCM scholarships of the Institute.
  - ii. R.K. Sharma MCM Scholarship:** Mr. Raj Kumar Sharma, an alumnus of 1971 batch of B.E. (Chemical Engineering) has created a corpus to support one (01) MCM scholarship of Rs. 10,000/- per year. This scholarship will be given to a deserving student of B.Tech. programme of any year and any department. The awardee will be selected as per the prevailing procedure adopted by SCSP to award MCM scholarships of the Institute.

- iii. Balagni Foundation MCM Scholarship:** Balagni Foundation has created a corpus to support one (01) MCM scholarship of Rs. 10,000/- per year. This scholarship will be given to a deserving student of third year of B.Tech. programme of Department of Civil Engineering. The awardee will be selected as per the prevailing procedure adopted by SCSP to award MCM scholarships of the Institute.
- iv. Ashok Kumar Jain MCM Scholarship:** Mr. Ashok Kumar Jain, an alumnus of 1971 batch of B.E. (Mechanical Engineering), has created a corpus to support one (01) MCM scholarship of Rs. 10,000/- per year. This scholarship will be given to a deserving student of second year of B.Tech. programmes of Department of Mechanical and Industrial Engineering. The awardee will be selected as per the prevailing procedure adopted by SCSP to award MCM scholarships of the Institute.