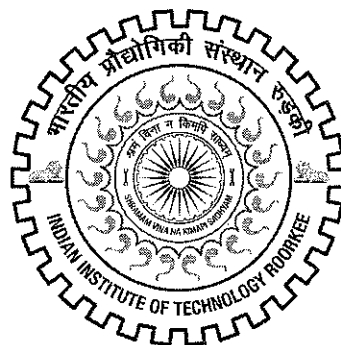


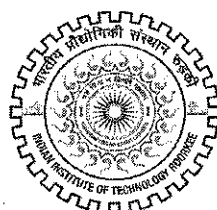
भारतीय प्रौद्योगिकी संस्थान रुड़की
रुड़की – 247 667 (भारत)
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE - 247 667 (INDIA)



सीनेट की चौहत्तरवीं बैठक हेतु कार्य सूची
AGENDA FOR THE
74th MEETING OF THE SENATE

बैठक सं०	: चौहत्तरवीं
MEETING NO.	: 74th
स्थान	: सीनेट हॉल, भा० प्रौ० सं० रुड़की
VENUE	: Senate Hall, IIT Roorkee
दिनांक	: 14 अगस्त 2018
DATE	: 14th August 2018
समय	: 4.00 बजे अपरान्ह
TIME	: 4.00 P.M.

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



कार्यसूची / A G E N D A

मुद्दासं०/ Item No.	विवरण / Particulars	पृष्ठ / Page(s)
74.1	सीनेट की दिनांक 16.05.2018 को आयोजित हुई 73वी बैठक के कार्यवृत्त की पुष्टि करना। To confirm the minutes of the 73 rd meeting of the Senate held on 16.05.2018.	1
74.2	सीनेट की दिनांक 16.05.2018 को आयोजित हुई 73वी बैठक में लिए गए निर्णयों के क्रियान्वयन हेतु की गई कार्रवाई को रिपोर्ट करना। To report on the actions taken to implement the decisions of the Senate taken in its 73 rd meeting held on 16.05.2018.	2-3
74.3	संस्थान शैक्षणिक प्रोग्राम समिति (आईएपीसी) के संविधान में संशोधन पर विचार करना। To consider amendment in the constitution of the Institute Academic Program Committee (IAPC)	4
74.4	संस्थान अनुसंधान समिति (आईआरसी) के संविधान में संशोधन पर विचार करना। To consider amendment in the constitution of the 'Institute Research Committee' (IRC).	5
74.5	यूजी पाठ्यक्रम में औद्योगिक/शैक्षिक दौरे को वैकल्पिक बनाये जाने के प्रस्ताव पर विचार करना। To consider the proposal that Industrial/Educational tour in UG Curriculum be made optional.	6
74.6	विशेषज्ञता के दौरान वैकल्पिक पाठ्यक्रमों की अनुमति देने के प्रस्ताव पर विचार करना। To consider the proposal of allowing program elective courses across specializations.	7

74.7	<p>तीसरे वर्ष से आगे के सेमेस्टर में वैकल्पिक पाठ्यक्रमों की संख्या चुनने में लचीलापन प्रदान करने के प्रस्ताव पर विचार करना ।</p> <p>To consider the proposal to provide flexibility in choosing the number of Program Elective Course(s) in a semester from 3rd year onwards.</p>	8-9
74.8	<p>बी. टेक तृतीय वर्ष पूरा होने के बाद सीजीपीए ≥ 7.50 होने पर आईडीडी कार्यक्रम में स्विच करने के लिए योग्यता मानदंडों में संशोधन के प्रस्ताव पर विचार करना।</p> <p>To consider the proposal to amend the eligibility criteria to switch over to the IDD program after completion of B. Tech. 3rd year if CGPA ≥ 7.50.</p>	10-13
74.9	<p>वाणिज्य में पीजी डिग्री के साथ चार्टर्ड एकाउंटेंसी में स्नातक डिग्री को पीएचडी के लिए पात्रता मानदंड के लिए भारतीय चार्टर्ड एकाउंटेंट्स संस्थान के पत्र पर विचार करना।</p> <p>To consider the letter from The Institute of Chartered Accountants of India to recognize Chartered Accountancy Course with graduation degree as PG degree in Commerce and to consider it as eligibility criteria for the Ph.D. programme.</p>	14-15
74.10	<p>इलेक्ट्रॉनिक और संचार इंजीनियरिंग विभाग के एम. टेक पाठ्यक्रमों के संशोधित कार्यक्रम संरचना और पाठ्यक्रम (संचार प्रणाली) पर विचार करना।</p> <p>To consider the modified program structure and syllabi of the courses of M. Tech. (Communication Systems) of the Department of Electronics and Communication Engineering.</p>	16-43
74.11	<p>वरिष्ठ पेशेवरों के लिए पीएचडी में प्रवेश की प्रक्रिया पर विचार करना।</p> <p>To consider the process of admission in Ph.D. for senior professionals.</p>	44-46
74.12	<p>पीएचडी विनियमों पर प्रो० मनीष श्रीखंडे समिति की रिपोर्ट पर विचार करना।</p> <p>To consider the report of Prof. Manish Shrikhande Committee on Ph.D. Regulations.</p>	47-108
74.13	<p>छात्रों के निम्नलिखित अनुरोधों/अपीलों पर विचार करना:</p> <p>(अ) उन छात्रों के लिए समय सीमा में विस्तार जो पहले से ही स्वीकार्य सीमा से परे एक साल का विस्तार प्राप्त कर चुके हैं।</p> <p>(ब) न्यूनतम अर्जित क्रेडिट आवश्यकता को पूरा नहीं करने के बावजूद कार्यक्रम जारी रखना।</p> <p>To consider the following requests/appeals from students:</p> <p>(i) Extension in time limit of students who have already availed one year extension beyond permissible limit.</p>	109-122

	(ii) Continuation of programme in spite of not fulfilling minimum earned credit requirement.	
74.14	<p>एम्स ऋषिकेश और लुलेआ तकनीकी विश्वविद्यालय स्वीडन में पजीकृत पीएचडी उम्मीदवारों की संयुक्त पर्यवेक्षण की अनुमति के लिए दो संकायों सदस्यों के अनुरोधों पर विचार करना</p> <p>To consider requests of two faculty members for allowing joint supervision of Ph.D. candidates enrolled in AIIMS, Rishikesh and Lulea Technical University, Sweden.</p>	123-136
74.15	<p>श्री मनोहर मनीष पुरुषोत्तम, 17511008, एमयूआरपी जिन्होंने पीएचडी प्रोग्राम में स्विच किया है और पीएमआरफ सीट आईआईटी रुड़की में भी प्राप्त की है, के अनुरोध पर विचार करना।</p> <p>To consider the request of Mr. Manohare Manish Purushottam, 17511008, MURP who has switched over to Ph.D. program and has also got offer for PMRF Seat at IIT Roorkee.</p>	137
74.16	<p>श्री सूर्य कुमार सिंह के पार्ट टाइम प्रायोजित श्रेणी के तहत आटम् सेमेस्टर 2018 में प्रवेश की पुष्टि करना।</p> <p>To ratify the admission of Mr. Surya Kumar Singh under Part-Time Sponsored Category in Autumn 2018.</p>	138-140
74.17	<p>छात्रों की निम्नलिखित अपीलों पर विचार करना:</p> <p>(अ) तीन छात्रों, जो एनआईटी उत्तराखंड में संकाय है और आईआईटी रुड़की से एम.टेक पूरा किये हुए है, के पीएचडी कार्यक्रम में प्रवेश और कोर्स कार्य में छूट के अनुरोध पर विचार करना।</p> <p>(ब) पीएचडी कार्यक्रम में कोर्स कार्य के सीजीपीए में सुधार के लिए श्री सोमपाल सिंह, अनु0 स0 17919011, रिसर्च स्कालर, गणित विभाग की वर्ष को दोहराने की अनुमति देने की अपील।</p> <p>(स) पीएचडी कार्यक्रम में कोर्स फाईनल्ट एलीमेंट मैथड में ग्रेड एवं सीजीपीए में सुधार करने के लिए श्री सर्वेश कुमार, अनु0 स0 17919010, रिसर्च स्कालर, गणित विभाग को एक अवसर प्रदान करने की अनुमति देने की प्रार्थना।</p> <p>(द) प्रोजेक्ट श्रेणी के अधीन आटमन् सेमेस्टर 2018-2019 में पीएचडी में प्रवेश के लिए श्री राज कुमार मिश्रा, जेआरफ, एमआईडी की प्रार्थना।</p> <p>(ध) दो शोध छात्रों, जिन्होंने पूर्व पीएचडी कोर्सों में 7.0 सीजीपीए की जरूरत को पूरा नहीं किया या पूरा करना नहीं लगता, को पीएचडी कार्यक्रम की निरन्तरता की अपील।</p>	141-165

	<p>To consider the following appeals of students:</p> <p>(a) Three students, who are faculty at NIT Uttarakhand and have completed M.Tech. from IIT Roorkee, have requested to admit them in the Ph.D. programme and to give them waiver in course work. (Appendix 'A')</p> <p>(b) Mr. Sompal Singh, En. No. 17919011, research scholar in the Department of Mathematics, has made an appeal to allow him to repeat the year to improve CGPA of course work in Ph.D. programme. (Appendix 'B')</p> <p>(c) Mr. Sarvesh Kumar (Enr 17919010), Research Scholar, Deptt of Mathematics has requested to give him a chance to improve the grades of a course on Finite Element Method to improve CGPA in course work in Ph.D. programme. (Appendix 'C')</p> <p>(d) Mr. Raj Kumar Mishra, JRF, MIED requested that he may be allowed admission to the Ph.D. programme for Autumn semester 2018-2019 under Project Category (Appendix 'D')</p> <p>(e) Two research students who could not either meet or are not likely to meet the requirement of 7.0 CGPA in pre Ph.D. courses have appealed for continuation of their Ph.D. programme. (Appendix 'E')</p>	
74.18	<p>पुस्तकालय (पुस्तकालयाध्यक्ष, उप पुस्तकालयाध्यक्ष, सहायक पुस्तकालयाध्यक्ष), आईआईसी और आईसीसी में वैज्ञानिक और कम्प्युटर स्टाफ, के समूह 'ए' पदों पर चयन समिति के लिए सीनेट के नामांकित पैनल पर विचार करना।</p> <p>To consider the panel of Senate Nominees for the Selection Committee for the Group 'A' positions of Library (Librarian, Dy. Librarian, Assistant Librarian), Scientific and Computer Staff in IIC & ICC.</p>	166-169
अन्य मद अध्यक्ष की अनुमति से/Under any item with the permission of the Chair.		

Item No. 74.1: To confirm the minutes of the 73rd meeting of the Senate held on 16.05.2018.

The minutes of the 73rd meeting of the Senate held on 16.05.2018 were circulated to the members vide e-mail dated 23.05.2018. No comments has been received.

The Senate may consider confirming the said minutes.

Item No.74.2: To report on the actions taken to implement the decisions of the Senate taken in its 73rd meeting held on 10.05.2018.

The minutes of the 73rd meeting of the Senate held on 10.05.2018 were circulated to the members vide e-mail dated 23.05.2018. The status of actions taken to implement the decisions of the Senate are as under:

Item No.	Reference to the Senate minutes	Abstract of the Minutes	Status of action taken
73.3	Mechanism for considering appeals related to academic affairs.	The Senate approved the proposal.	Notified and uploaded on Channel-i.
73.4	Revised guidelines for casual students.	The Senate approved the proposal.	Notified and uploaded on Channel-i.
73.5	Proposal to discontinue the practice of admitting interns through academic affairs office.	The Senate approved the proposal with effect from the next academic year.	Notified and uploaded on Channel-i.
73.6	Syllabi of courses of M. Tech. (Chemical Engineering).	The Senate approved the item.	Notified and uploaded on Channel-i.
73.7	Academic Calendar for the session 2018-19.	The Senate approved the item.	Notified and uploaded on Channel-i.
73.8	Eligibility criteria for admission of foreign students in M.Tech./Ph.D. programmes.	The Senate approved the proposal.	Notified and uploaded on Channel-i.
73.10	Suggestion regarding the dates mentioned on Provisional Degree Certificate (PDC) and degree given to Ph.D. students during	The Senate considered the proposal and approved that only the date of viva-voce be printed on Provisional Degree Certificate and the date of Convocation be printed on the Degree	DoAA has been informed.

	convocation.	Certificate.	
73.11	Increasing the limit of 80 characters for Ph.D. thesis title.	The Senate considered the proposal and approved the same without any limit on the number of characters in Ph.D. thesis title.	Notified and uploaded on Channel-i.
73.12	Number and sequence of signatories on degree certificate and the mode of signature.	The Senate considered the proposal and approved that the degree will have only two ink signatures - Registrar on the left and the Chairman, Senate & Director on the right. Further, suggested that the degree be examined from the design perspective with a view to improve its aesthetics.	DoAA has been informed.
Items No. 73.9, 73.13 & 73.14 were only for ratification of the Senate.			

Item No.74.03: To consider amendment in the constitution of the Institute Academic Program Committee (IAPC)

It is proposed that the constitution of the IAPC as given in the Senate Manual be amended as follows:

Existing	Proposed
Dean Academics, Chairman	Dean, Academic Affairs - Chair
The immediate past Dean, Academics	All Associate Deans, Academic Affairs
The Associate Dean, Academic Studies	The immediate past Dean, Academic Affairs
The Associate Dean, Academic Research	
Two Senate Nominees	Two Senate Nominees
One representative of each Academic Department/Academic Centre organizing Undergraduate or (and) Postgraduate programme(s) nominated by the Department/ Centre's Faculty Committee and also the Departments/Academic Centres contributing regularly to UG/PG Teaching but not having an UG/PG Programme	Chairs of all DAPCs and CAPCs
The Chairman, JEE	Deleted
Chairman, Institute Time Table Committee	
The Chairman, GATE	
Chairman, PG Admission	
Three Students Representatives (nominated by the Dean of Students' Welfare)	Four students' representatives nominated by the Dean of Students' Welfare, out of which at least one be a girl student
Deputy Registrar Academic	Two officers from the Academic Office, one of whom will be the Secretary
Assistant Registrar (Academic Studies), Secretary (ex-officio)	

The proposal is placed for the consideration and approval of the Senate.

Item No.74.04: To consider amendment in the constitution of the Institute Research Committee (IRC)

It is proposed that the constitution of the IRC as given in the Senate Manual be amended as follows:

Existing as per Senate Manual	Proposed
The Dean, Academics (ex-officio), Chairman	Dean, Academic Affairs - Chairperson All Associate Deans, Academic Affairs The immediate past Dean, Academic Affairs
The immediate past Dean, Academics	
The Associate Dean, Academic Studies	
The Associate Dean, Academic Research	
Chairman, Institute Time Table Committee	Deleted
The Chairman, PG Admission	Deleted
Two Senate Nominees	Two Senate Nominees
Two Director Nominees for Sponsored Research	
One representative of each Academic Department/centre organizing research programmes nominated by the Department/ Centre's Faculty Committee	Chairs of all DRCs and CRCs
Three Students (Research Scholar Representatives) nominated by the Dean of Students' Welfare	One research scholar each from Sciences, Engineering and Management/HSS Department, out of which at least one be a girl student, to be nominated by DOSW
Deputy Registrar, Academics	Two officers from Academic Office, one of whom will be the Secretary
Assistant Registrar (Academic Research), Secretary (ex officio)	

The proposal is placed for the consideration and approval of the Senate.

Item No. 74.05: To consider the proposal that Industrial/Educational tour in UG Curriculum be made optional.

The IAPC in its meeting held on 27th June 2018 considered the proposal of discontinuing the mandatory requirement of Industrial/Educational tour in the UG Curriculum. The IAPC recommended that it be made optional and individual departments be given the option to choose whether they would like to keep the Industrial/Educational tour mandatory.

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

Item No. 74.06: To consider the proposal of allowing program elective courses across specializations.

The IAPC in its meeting held on 27th June 2018 considered the proposal and recommended that students be allowed to choose program elective courses across specializations.

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

Item No. 74.07: To consider the proposal to provide flexibility in choosing the number of Program Elective Course(s) in a semester from 3rd year onwards.

The IAPC in its meeting held on 27th June 2018 recommended the proposal to provide flexibility in choosing the number of program elective courses in a semester. The number of electives that can be taken will be as per **Appendix 'A'**. This is subject to the maximum permissible credit limit in a semester.

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

Appendix 'A'
Item No. Senate/74.07

Allowed Range of PEC Courses/Credits for Various Programmes

Program	Semester	Allowed PEC courses/credits (Existing)	Allowed PEC courses/credits (Recommended)
B.Tech.	5	1 / 4	(0-2) / (0-8)
	6	1 / 4	(0-2) / (0-8)
	7	2 / 8	(0-3) / (0-12)
	8	2 / 8	(0-3) / (0-12)
B.Arch.	5	1 / 3	(0-2) / (0-8)
	6	1 / 3	(0-2) / (0-8)
	7	1 / 3	(0-2) / (0-8)
	9	1 / 3	(0-2) / (0-8)
IMT	6	2 / 8	(0-3) / (0-12)
	7	2 / 8	(0-3) / (0-12)
	8	2 / 8	(0-3) / (0-12)
	9	2 / 8	(0-3) / (0-12)
MSM	5	1 / 4	(0-2) / (0-8)
	6	1 / 4	(0-2) / (0-8)
	7	1 / 4	(0-2) / (0-8)
	8	1 / 4	(0-2) / (0-8)
	9	2 / 8	(0-3) / (0-12)
	10	1 / 4	(0-2) / (0-8)
M.Sc.	5	1 / 4	(0-2) / (0-8)
	6	1 / 4	(0-2) / (0-8)
	7	1 / 4	(0-2) / (0-8)
	8	2 / 8	(0-3) / (0-12)
	9	2 / 8	(0-3) / (0-12)
MSP	9	4/16	(2-4)/(6-16)
	10	2/8	(2-4)/(6-16)

The number of credits in a semester should, however, not breach the maximum allowed limit.

Item No. 74.08: To consider the proposal to amend the eligibility criteria to switch over to the IDD program after completion of B. Tech. 3rd year if CGPA \geq 7.50.

The current eligibility criteria for B. Tech. students (3rd year) to switch over to IDD program is CGPA $>$ 7.5. The IAPC, in its meeting held on 25th July 2018, considered the request of a student who has CGPA 7.5 (**Appendix 'A'**) and recommended that he be allowed to switch over to the IDD program. The IAPC also recommended to amend the eligibility criteria as CGPA \geq 7.50.

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

July 24, 2018

To the Dean^{of} Academic Affairs

Subject: Request to allow me switch over to IDD Programme

Dear Sir,

I am Mihirkumar Prajapati (En. 15117053). I am a IV year B.Tech Mechanical engineering student. At the end of the previous semester, I submitted the application form for switch over to Integrated Dual Degree (IDD) Programme. At that time, I was having 7.7 CGPA. But due to some unfortunate reasons, I could not perform very well in the exams of previous semester and I ended up having 7.50 CGPA. Since criteria for this switch over is CGPA should be more than 7.5, the application is in pending status. I request you to allow me for switch over to IDD.

I am strongly motivated to go for higher studies. I am aware that I am not having good CGPA and there is a little time left to improve it much. I have been involved in the various research activities during last two years. I also received SURA grant for my research project during Summer 2017. I have published two research articles in reputed journals (SCI indexed). I have also presented my works at several national and international conferences.

During this summer I did my research internship at Sorbonne University, Paris which is one of the most prestigious institutes of Europe and I am motivated to go there for my PhD.

With the extra courses in the IDD, I see it as a chance to improve my CGPA as well. Moreover, I intend to utilize the next two years to the fullest and contributes to the understanding of two-phase flows through my research. I hope you understand how important for me it is to do IDD. Your decision is critical for the future course of my career. So please kindly allow me for switch over to IDD. Thank you in advance.

Mihirkumar Prajapati
B.Tech (Final year) 15117053
Department of Mechanical & Industrial Engineering,
Indian Institute of Technology Roorkee, India.

Head, M. & I.E.D.
I.I.T. Roorkee

24.7.2018

Forwarded
24/7/18
अध्यक्ष / Chairman
डी० ए० एस० सी० / D.A.S.C.
एवं औद्योगिक अभियंता विभाग / M & I
सं० रुड़की / I.I.T. Roorkee - 24/66



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 15117053
PROGRAMME: BACHELOR OF TECHNOLOGY (MECHANICAL)

NAME: PRAJAPATI MIHIRKUMAR
NARENDRAKUMAR

SESSION 2015-16		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
CEN-105	INTRODUCTION TO ENVIRONMENTAL STUDIES	C+	3.00		
HSN-001A	COMMUNICATION SKILLS (BASIC)	B	2.00		
HSN-002	ETHICS AND SELF AWARENESS	B+	2.00		
MAN-001	MATHEMATICS-I	C+	4.00		
MIN-101A	INTRODUCTION TO MECHANICAL ENGINEERING	C+	2.00		
MIN-103	PROGRAMMING AND DATA STRUCTURES	B	4.00		
PHN-001	MECHANICS	C+	4.00		
EARNED CREDITS	21	TOTAL EARNED CREDITS	21	SGPA	7.476
REG. CREDITS	21			CGPA	7.476

SESSION 2015-16		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
MAN-004	NUMERICAL METHODS	C	4.00		
MIN-104	MANUFACTURING TECHNOLOGY-I	A	4.00		
MIN-106	ENGINEERING THERMODYNAMICS	C+	4.00		
MIN-108	MECHANICAL ENGINEERING DRAWING	A	4.00		
MTN-106	MATERIAL SCIENCE	C+	4.00		
PHN-008	ELECTROMAGNETIC THEORY	B	4.00		
PR-501	N.C.C.	B	2.00		
EARNED CREDITS	26	TOTAL EARNED CREDITS	47	SGPA	8.000
REG. CREDITS	26			CGPA	7.766

SESSION 2016-17		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
CEN-102	SOLID MECHANICS	C+	4.00		
MIN-201	KINEMATICS OF MACHINES	B	4.00		
MIN-203	MANUFACTURING TECHNOLOGY-II	B+	4.00		
MIN-205	FLUID MECHANICS	B	4.00		
MIN-291	ENGINEERING ANALYSIS AND DESIGN	B	4.00		
EARNED CREDITS	20	TOTAL EARNED CREDITS	67	SGPA	8.000
REG. CREDITS	20			CGPA	7.836

SESSION 2016-17		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
EEN-112	ELECTRICAL SCIENCE	B	4.00		
HSS-01	ECONOMICS	B	3.00		
MIN-204	MACHINE DRAWING	B+	4.00		
MIN-206	MECHANICS OF MATERIALS	C+	4.00		
MIN-208	THEORY OF PRODUCTION PROCESSES	A	4.00		
MIN-210	ENERGY CONVERSION	C+	4.00		
EARNED CREDITS	23	TOTAL EARNED CREDITS	90	SGPA	8.174
REG. CREDITS	23			CGPA	7.922

SESSION 2017-18		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
IBM-308	FUNDAMENTAL OF INNOVATION AND BUSINESS MODELS	B	3.00		
MIN-301	DYNAMICS OF MACHINES	C+	4.00		



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 15117053

NAME: PRAJAPATI MIHIRKUMAR

PROGRAMME: BACHELOR OF TECHNOLOGY (MECHANICAL)

NARENDRAKUMAR

MIN-303	PRINCIPLES OF INDUSTRIAL ENGINEERING	C	4.00
MIN-305	HEAT AND MASS TRANSFER	C	4.00
MIN-321	VIBRATION AND NOISE	C	4.00
MIN-391	TECHNICAL COMMUNICATION	A	2.00
EARNED CREDITS	21	TOTAL EARNED CREDITS	111
REG. CREDITS	21	SGPA	6.857
		CGPA	7.721

SESSION 2017-18		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
IMA-303	ROBOTICS & CONTROL	C+	3.00		
MIN-300	LAB BASED PROJECT	C	4.00		
MIN-302	MACHINE DESIGN	C+	6.00		
MIN-304	FLUID MACHINERY	C	4.00		
MIN-324	FEM APPLICATION IN MECHANICAL ENGG.	C+	4.00		
MIN-399	EDUCATIONAL TOUR	AP	0.00		
MIN-537	I. C. ENGINES	C	4.00		
EARNED CREDITS	25	TOTAL EARNED CREDITS	136	SGPA	6.520
REG. CREDITS	25			CGPA	7.500

STUDENT HAS NOT YET COMPLETED THE PROGRAMME

Evaluation and Grading : The student is graded for his/her academic performance on a ten point scale in the following manner:

Old Grading System (Applicable upto the batch 2014-15 session)

Outstanding - A+(10), Excellent - A(9), Very Good - B+(8), Good - B(7), Average - C+(6), Below Average - C(5), Marginal - D(4), Poor - E(2), Very Poor - F(0), Failed due to Short Attendance -FS(0), Audit Pass - AP, Audit Fail - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

New Grading System (Applicable from the batch 2015-16 session onwards)

Exceptional Good/Outstanding - O(10), Excellent - A(10), Very Good - B+(9), Good - B(8), Fair - C+(7), Average - C(6), Below Average - D+(5), Marginal - D(4), Fail due to poor performance - F(0), Failed due to Short Attendance -FS(0), Pass in Audit Course - AP, Fail in Audit Course - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

Note:-

The medium of Instruction at this Institute is English.

Place: Roorkee

Assistant Registrar (Evaluation)

Dated: 7/23/2018

Item No.74.09: To consider the letter from The Institute of Chartered Accountants of India to recognize Chartered Accountancy Course with graduation degree as a PG degree in Commerce and to consider it as eligibility criteria for the Ph.D. program.

The IRC in its 21st meeting held on 16.07.2018 discussed the above issue (**Appendix 'A'**) in the light of the opinion given by HSS and MS departments and recommended as follows:

- (a) CA with a graduate degree be considered as only graduate degree.
- (b) It can be considered for admission to the Ph.D. program in the Department of Management Studies.
- (c) The screening criteria as suggested by the department shall be minimum 60% marks / 6.0 CPI in the graduate degree. This may be relaxed to 55% marks / 5.5 CPI for SC/ST and PD candidates.

The recommendation of IRC is placed for the consideration and approval of the Senate.



THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

(Set up by an Act of Parliament)

DIRECTOR
Board of Studies

निदेशक कार्यालय/Director Office
आयुक्त संख्या/Dy. No. 373
दिनांक/Date: 25.4.18

Signature

19th April, 2018

Prof. Ajit K Chaturvedi,
Director
Indian Institute of Technology, Roorkee
Roorkee 247 367
Uttaranchal

Pl. examine and decide.
DOAA

Chaturvedi
25/4/18

Sub: Recognition of Chartered Accountancy qualification for registration to Ph. D Programme

Dear Sir,

The Institute of Chartered Accountants of India is the premier Accounting Body in India for regulating the profession of Chartered Accountants (CA) established by an Act of Parliament viz, The Chartered Accountants Act, 1949. The Institute registers students for pursuing the Chartered Accountancy Course for various levels (Foundation, Intermediate and Final level) of the course, provides theoretical education, practical training, conducts examinations and thereafter confers Membership to the successful students to be known as "Chartered Accountant". The ICAI has grown to cross the mark of more than 2.80 lakh members and 8.35 lakh students as of now.

The Chartered Accountants (CAs) are spread all over the country and are generally gainfully engaged either in rendering professional services to the public or to their respective employing bodies. Many of them are interested in undertaking research work for Ph.D. degree. Given an opportunity, we believe, many members of the Institute will be able to contribute their intrinsic worth to the society by producing valuable research studies. There is no doubt that CAs with their sound practical and technical knowledge can contribute very significantly to the world of academics in the field of Accountancy and Commerce, if allowed to pursue their Ph.D.

In this context, we may apprise you that the Association of Indian Universities (AIU) (copy attached) has already recognized Chartered Accountancy qualification along with graduation degree, as equivalent to postgraduate degree in commerce or allied discipline for the purpose of pursuing Ph.D programme of various universities. Accordingly, 101 Indian Universities, 6 IIMs and 2 IITs (Madras & Bombay) (list enclosed) in the country have recognized Chartered Accountancy qualification for the specific purpose of registration to Ph.D. programme of respective universities.

We would, therefore, request you to kindly accord recognition to Chartered Accountancy Course for enrolling Chartered Accountants as research scholars for the doctoral degree (Ph.D.) of your university.

An early reply will be highly appreciated.

With Best Regards,

Yours sincerely,

(CA. Vandana D. Nagpal)

- Encl: 1. AIU Letter
2. Prospectus of ICAI
3. List of Universities recognized CA Qualification

AR (Juris) with a request to provide the list of current courses run by DOMS & DOTS.

AR (A) FFA desirous info. list 21/4/18

ADA

22/05/18

ADC/ADE

Please share your views.

26/04/18

J.R. (Acad) / AR (Acad) 17/05/18

FNA please

Associate Dean Academic Affairs-Curriculum

Item No. 74.10: To consider the modified program structure and syllabi of the courses of M. Tech. (Communication Systems) of the Department of Electronics and Communication Engineering.

The IAPC in its meeting held on 25th July 2018 considered and recommended the modified program structure and syllabi of the courses of M.Tech. (Communication Systems) of the Department of Electronics and Communication Engineering. **(Appendix 'A')**

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

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

M.Tech. (Communication Systems)

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
1st YEAR					Semester-I (Autumn)									
1.	ECN-510	Digital Communication Laboratory	PCC	2	0	0	3	0	3	-	40-60	-	-	40-60
2.	ECN-511	Linear Algebra and Random Processes	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.		ELECTIVE - I	PEC	3 / 4	3									
4.		ELECTIVE - II	PEC	4	3									
5.		ELECTIVE - III	PEC	4	3									
		Total		17 - 18	12									
					Semester-II (Spring)									
1.	ECN-600	Project	PCC	2	0	0	3	0	0	-	100	-	-	-
2.	ECN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
3.		ELECTIVE - IV	PEC	3 / 4	3									
4.		ELECTIVE - V	PEC	4	3									
5.		ELECTIVE - VI	PEC	4	3									
6.		ELECTIVE - VII	PEC	4	3									
		Total		19- 20	12									

2 nd YEAR		Semester- I (Autumn)												
1.	ECN-701A	Dissertation 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.	ECN-701B	Dissertation Stage-II (contd. from III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										
		Total Credits		66 - 68										

Program Elective Courses (Communication Systems)

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.	ECN-512	Advanced Digital Communication	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	ECN-513	Multirate Digital Signal Processing	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	ECN-514	Detection and Estimation Theory	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	ECN-515	Information and Coding Theory	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	ECN-611	Wireless Communication Systems	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
6.	ECN-612	Wireless Networks	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
7.	ECN-613	Telecommunication Networks	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
8.	ECN-614	Adaptive Signal Processing Techniques	PEC	4	3	0	2	3	0	10-15	10-20	20-30	40-50	-
9.	ECN-615	Advanced Coding Theory	PEC	4	3	0	2	3	0	10-15	10-20	20-30	40-50	-
10.	ECN-616	Speech and Audio Processing	PEC	4	3	0	2	3	0	10-15	10-20	20-30	40-50	-
11.	ECN-617	Image Processing and Computer Vision	PEC	4	3	0	2	3	0	10-15	10-20	20-30	40-50	-
12.	ECN-531	Microwave Engineering*	PEC	3	3	0	0	3	0	20-35	-	20-30	40-50	-
13.	ECN-539	Fiber Optic Systems*	PEC	3	3	0	0	3	0	20-35	-	20-30	40-50	-
14.	ECN-550	Radar Signal Processing*	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
15.	ECN-555	Microwave Imaging*	PEC	3	3	0	0	3	0	20-35	-	20-30	40-50	-
16.	ECN-573	Digital VLSI Circuit Design*	PEC	3	3	0	0	3	0	20-35	-	20-30	40-50	-
17.	ECN-594	VLSI Digital Signal Processing*	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
18.	ECN-631	RF Receiver Design*	PEC	3	3	0	0	3	0	20-35	-	20-30	40-50	-

* Courses offered from other specialization groups of the ECE Department.

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 511** Course Title: **Linear Algebra and Random Processes**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Autumn** 7. Subject Area: **PCC**

8. Pre-requisite: Nil.

9. Objective: To introduce the students to the theory and applications of linear algebra, random variables and random processes.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Vector spaces, subspaces, bases and dimensions, linear dependence and independence, vector products, orthogonal bases and orthogonal projections, Gram-Schmidt orthonormalization procedure	10
2.	Linear operators and Matrices: Eigen values and Eigen vectors, characteristic polynomial, diagonalization, Hermitian and unitary matrices, singular value decomposition	10
3.	Discrete and continuous random variables: distribution and density functions, conditional distributions and expectations, functions of random variables, moments, sequence of random variables	10
4.	Random process: Probabilistic structure; Mean, autocorrelation and auto-covariance functions; Strict-sense and wide-sense stationary processes; Power spectral density; LTI systems with WSS process as the input; Examples of random processes – white noise, Gaussian, Poisson and Markov Processes	12
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	S.Axler, "Linear Algebra Done Right", 3 rd Edn., Springer International Publishing.	2015
2.	G.Strang, "Linear Algebra and Its Applications", 4 th Edn., Cengage Learning.	2007
3.	K.M. Hoffman and R. Kunze, "Linear Algebra", 2 nd Edn.,Prentice Hall India.	2015
4.	A. Papoulis and S. Pillai, "Probability, Random Variables and Stochastic Processes", 4 th Edn., McGraw Hill.	2017
5.	H. Stark and J.W. Woods, "Probability and Random Processes with Applications to Signal Processing", 3 rd Edn., Pearson India.	2001
6.	A. Leon-Garcia, "Probability, Statistics and Random Processes for Electrical Engineers", 3 rd Edn.,Prentice Hall India.	2008

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 512** Course Title: **Advanced Digital Communication**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Autumn** 7. Subject Area: **PEC**

8. Pre-requisite: **Nil.**

9. Objective: To introduce the students to the principles, techniques and applications of digital communication.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Characterization of Band-Pass signals, lowpass equivalent of bandpass signals, energy consideration, lowpass equivalent of bandpass system; Signal-space concepts, orthogonal expansion of signals	4
2.	Linear modulation, orthogonal and biorthogonal modulation, differential modulation, nonlinear modulation; phase modulation, quadrature amplitude modulation, continuous-phase modulation	10
3.	Hypothesis testing; Optimal reception in AWGN; Performance analysis; optimum detection and error probability for band-limited signaling; optimum detection and error probability for energy-limited signaling	8
4.	Synchronization and non-coherent communication; signal parameter estimation, carrier phase estimation, symbol timing estimation; non-coherent detection of carrier modulated signals	6
5.	Band-limited channels; Inter-Symbol Interference (ISI); characterization of band-limited channels, signal design for band-limited channels	4
6.	Channel equalization: optimum maximum-likelihood estimation, maximum-likelihood sequence estimation; linear equalization, MSE equalizer; decision feedback equalization, coefficient optimization, predictive decision feedback equalization	10
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	U. Madhow, "Fundamentals of Digital Communication", Cambridge University Press.	2008
2.	R.G. Gallager, "Principles of Digital Communication", Cambridge University Press.	2008
3.	J.G. Proakis and M. Salehi, "Digital Communications", 5 th Edn., McGraw-Hill.	2008
4.	S. Hykin, "An Introduction to Analog & Digital Communication", 4 th Edn., Wiley	2012
5.	B. Ekman, "Handbook of Digital Communication", NY Research Press	2015

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 513** Course Title: **Multirate Digital Signal Processing**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Autumn** 7. Subject Area: **PEC**

8. Pre-requisite: Digital Signal Processing.

9. Objective: To introduce the students to the principles, techniques and applications of digital signal processing, specifically multi-rate signal processing.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Review of DSP concepts: Discrete-time Fourier transform (DTFT), discrete Fourier transform (DFT), and fast Fourier transform (FFT); Karhunen-Loeve transform (KLT), discrete cosine transform (DCT); Digital filter structures, FIR, IIR and their implementation	8
2.	Fundamentals of multirate systems: Sampling and resampling in time and frequency domains, interpolation (up-sampling), down-sampling, arbitrary sample-rate conversion, Multistage implementation of sampling rate conversion; Sampling rate conversion of bandpass signals	10
3.	Multirate processing using Filter-banks: Noble identities; Type-1 and Type-2 polyphase representations, poly-phase filter structures, Uniform DFT filter bank, Half-band filters, Quadrature mirror filters and variations thereof	10
4.	Wavelet transform and its relation to multirate filter banks, Relating dyadic MRA to filter banks, two-band filter bank design for dyadic wavelets; Examples of application of wavelet transform, Orthogonal and biorthogonal wavelets; Sub-band coding	10
5.	Applications of multirate systems: Audio signal processing; Image signal processing; Base-band signal processing	4
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	J.G. Proakis, "Digital Signal Processing: Principles, Algorithms and Applications", 4 th Edn., Pearson.	2007
2.	A.V. Oppenheim and R.W. Schaffer, "Discrete-Time Signal Processing", 3 rd Edn., Pearson.	2009
3.	P.P. Vaidyanathan, "Multirate Systems And Filter Banks", Prentice Hall.	1992
4.	F.J. Harris, "Multirate Signal Processing for Communication Systems: Current Practice and Next Generation Techniques", 2 nd Edn., Prentice Hall.	2009
5.	V.M. Gadre and A.S. Abhankar, "Multiresolution and Multirate Signal Processing – Introduction, Principles and Applications", Mc-Graw Hill.	2017

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE:

Electronics & Communication Engineering

1. Subject Code: ECN- 514

Course Title: Detection and Estimation Theory

2. Contact Hours: L: 3

T: 1

P: 0

3. Examination Duration (Hrs.): Theory: 3

Practical: 0

4. Relative Weight:

CWS: 20-35PRS: 0

MTE:20-30

ETE:40-50

PRE: 0

5. Credits: 4

6. Semester: Autumn

7. Subject Area: PEC

8. Pre-requisite: Nil

9. Objective: To acquaint the students of Communication Engineering with the knowledge of how to use the tools of probability and signal processing to estimate signals and parameters and detect events from data.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Introduction to detection and estimation problem in signal processing and communication	2
2.	Estimation in signal processing; Sufficient statistic, Bias; Minimum variance unbiased estimator; Cramer-Rao lower bound; Best linear unbiased estimator; Maximum likelihood estimation (MLE)	9
3.	Bayesian Estimation – Minimum mean square-error (MMSE) estimators, Maximum a-posteriori (MAP) estimators; Linear MMSE estimation, Linear estimation of signals, Weiner filtering; Kalman filtering – Kalman estimation and tracking	9
4.	Detection theory in signal processing; Hypothesis test – Bayesian, Minimax Neyman-Pearson and composite hypothesis testing; Receiver operating characteristics	8
5.	Detection of deterministic signals with known parameters in Gaussian noise, Matched filters; Detection of random signals with known characteristics, Estimator-correlator; Detection of deterministic signals with unknown parameters, Bayesian approach and generalized likelihood ratio test (GLRT); Detection of random signals with unknown parameters; Expectation maximization; Hidden Markov Model (HMM)	12
6.	Applications of detection and estimation in signal processing and	2

	communication – biomedicine, communications, radar, sonar, etc	
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	S.M. Kay, "Fundamentals of Statistical Signal Processing – Estimation Theory (vol. 1)", Prentice Hall.	2009
2.	S.M. Kay, "Fundamentals of Statistical Signal Processing – Detection Theory (vol. 2)", Prentice Hall.	2009
3.	H.L. Van Trees, "Detection, Estimation and Modulation Theory", Part I, Wiley Interscience.	2013
4.	H. Vincent Poor, "An Introduction to Signal Detection and Estimation", 2 nd Edn., Springer.	1998
5.	K.S. Shanmugan and A.M. Breipohl, "Random Signals: Detection, Estimation and Data Analysis", Wiley.	2010

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 515** Course Title: **Information and Coding Theory**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Autumn** 7. Subject Area: **PEC**

8. Pre-requisite: Nil.

9. Objective: To acquaint the students of Communication Engineering with the knowledge of information theory, source coding for data compression and channel coding for error detection and correction.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Introduction to probability, uncertainty and information, entropy; Joint and conditional entropies, Mutual information	3
2.	Source coding theorems, Kraft-McMillan inequality, prefix code, variable and fixed length codes; Discrete memoryless channels, Binary symmetric channels (BSC), Capacity of a discrete channel; Channel coding theorem; Entropy for sources with memory, Markov sources	10
3.	Information measures for continuous random variables – Extensions of the discrete measures to the continuous case; Differential entropy, Entropy power, Mutual information, Distortion; Rate distortion function; Capacity for waveform channel, channel capacity theorem, Bandwidth efficiency, Shannon's Limit	9
4.	Source coding – Introduction to data compression, lossless and lossy compression, entropy coding; Huffman code, Shannon-Fano code, Arithmetic code, Run-length code, Lempel-Ziv code	10
5.	Channel coding – Error correcting codes, minimum distance principles, error detection and correction capabilities; Linear block code, Single parity check code, repetition code, Hamming code; Binary cyclic code; Convolutional code	10
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	T.M. Cover and J.A. Thomas, "Elements of Information Theory", 2 nd Edn., Wiley Interscience.	2006
2.	R. Bose, "Information Theory, Coding and Cryptography", Tata McGraw-Hill.	2008
3.	K. Sayood, "Introduction to Data Compression", 5 th Edn.,Morgan Kaufmann.	2017
4.	S. Roman, "Coding and Information Theory", Springer.	1992
5.	R.E. Blahut, "Principles and Practice of Information Theory", Addison-Wesley Publishing Company.	1987

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 611** Course Title: **Wireless Communication Systems**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Spring** 7. Subject Area: **PEC**

8. Pre-requisite: **Advanced Digital Communication, Information and Coding Theory.**

9. Objective: To acquaint the students with the concepts and the issues involved in the design of wireless communication systems.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Wireless channels: Physical modeling, input/output model, time and frequency coherence, statistical channel models	4
2.	Point-to-point communication: Detection in a Rayleigh fading channel, diversity techniques, channel uncertainty	6
3.	Cellular systems: Multiple access and interference management, narrow-band and wide-band systems	6
4.	Capacity of wireless channels, MIMO capacity, multiuser capacity, Uplink/Downlink AWGN and fading channels, multiuser diversity, opportunistic communication, relay communication	12
5.	OFDM and its application to wireless communication: Subcarrier mapping, synchronization, PAPR reduction techniques	6
6.	4G and 5G technology: System key components, different layers of OSI model, relay technology, applications and challenges	8
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	D. Tse and P. Viswanath, "Fundamentals of Wireless Communication", Cambridge University Press.	2005
2.	Y. Li and G.L. Stuber, "Orthogonal Frequency Division Multiplexing for Wireless Communications", Springer.	2006
3.	Y.S. Cho, J. Kim, W.Y. Yang and C.G. Kang, "MIMO-OFDM Wireless Communications with MATLAB".	2010
4.	"5G Mobile and Wireless Communications Technology", A. Osseiran, J.F. Monserrat and P. Marsch (eds.), Cambridge University Press.	2016
5.	A. Goldsmith, "Wireless Communications", Cambridge University Press.	2012

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 612** Course Title: **Wireless Networks**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Spring** 7. Subject Area: **PEC**

8. Pre-requisite: **Nil.**

9. Objective: To acquaint the students with the concepts and the issues involved in the design of wireless networks.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Wireless network topologies, infrastructure and ad-hoc networks, different generations of wireless networks; The cellular concept and design fundamentals, coverage and capacity expansion techniques	5
2.	Fixed assignment and random access; Capacity and performance of FDMA, TDMA, DS/CDMA and FH/CDMA; WCDMA and OFDMA; Access techniques for WLAN, Bluetooth and mobile data networks; Quality of service enabled wireless access, access methods for integrated services	8
3.	Location and handoff management, classification of handoffs and handoff algorithms, mobile IP; Power control, and techniques of power control, power saving mechanisms, energy efficient designs; Security in wireless networks	8
4.	GSM: Reference architecture, registration, call establishment, handoff mechanisms, communication in the infrastructure, GPRS; IS-95: Reference architecture, physical layer, radio resource and mobility management; IMT 2000: Physical layer, handoff, power control; Introduction to cordless systems and wireless local loop technologies	7
5.	Reference and layered architecture of IEEE 802.11 WLANs, physical layer alternatives, MAC scheme and frame format, handoff and power management; Protocol architecture, physical and MAC layer of Hiperlan-1 and Hiperlan-2; IP telephony using WLANs	5

6.	Wireless home networking; HomeRF; Bluetooth: Protocol stack, physical and MAC layer	5
7.	Broadband wireless access and IEEE 802.16; Next generation broadband wireless networks and navigational services	4
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	K. Pahalvan and P. Krishnamurthy, "Principles of Wireless Networks: A Unified Approach", Pearson Education.	2002
2.	W. Stallings, "Wireless Communications and Networking", 2 nd Edn., Pearson Education.	2009
3.	T.S. Rappaport, "Wireless Communications: Principles and Practice", 2 nd Edn., Pearson Education.	2002
4.	R. Prasad and L. Munoz, "WLANs and WPANs: Towards 4G Wireless", Artech House.	2003
5.	S. Haykin and M. Moher, "Modern Wireless Communication", Pearson Education.	2005
6.	R. Pandya, "Mobile and Personal Communication Systems and Services", Prentice-Hall of India.	2000
7.	M. Guizani, H.-H. Chen and C. Wang, "The Future of Wireless Networks: Architectures, Protocols, and Services", CRC Press.	2015

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE: **Electronics & Communication Engineering**

1. Subject Code: **ECN- 613** Course Title: **Telecommunication Networks**

2. Contact Hours: **L: 3 T: 1 P: 0**

3. Examination Duration (Hrs.): **Theory: 3 Practical: 0**

4. Relative Weight: **CWS: 20-35PRS: 0 MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4** 6. Semester: **Spring** 7. Subject Area: **PEC**

8. Pre-requisite: **Nil.**

9. Objective: To provide an in-depth study of communication networks with emphasis on development of analytical tools and quantitative performance evaluation.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Introduction to communication networks, network topologies, internetworking, circuit and packet switching; Layered architecture and protocols, OSI reference model and functions of various layers, overview of TCP / IP, ISDN and SS – 7 protocol architectures	3
2.	Brief characterization of communication channels and fundamental limits in digital transmission; Line codes and modems; Transmission media and transmission impairments; Synchronous and asynchronous time division multiplexing, SONET and SDH	3
3.	Error detection: Parity check, polynomial representation, cyclic redundancy checks and their capabilities; Error control: Stop and wait, go - back n and selective repeat ARQ strategies, correctness and throughput analysis; Framing and optimum frame size; HDLC and LAPB protocols, throughput analysis of HDLC	6
4.	Introduction to queuing models, modeling of arrivals, inter-arrival times and service times, Poisson process; Little's theorem, proof and examples; Continuous-time discrete event process and Markov chain, Birth-Death process; Analysis and applications of M/M/1, M/M/m, M/M/m/m, M/M/m/K and M/M/∞ queues; M/G/1 queue, vacation, reservation, polling, and priority; G/G/1 queue; Network of queues, Kleinrock's independence assumption, Burke's and Jackson's theorems	15
5.	Classification and performance measures of MAC protocols; Pure-	8

	ALOHA and slotted-ALOHA, Markov chain modeling, stability, BEB and other stabilization techniques; Splitting algorithms; Non-persistent, 1-persistent and p-persistent CSMA, performance evaluation; CSMA/CD and CSMA/CA; Polling, reservation and token ring protocols; Overview of IEEE 802 standards and frame structures of 802.3 and 802.5	
6.	Main issues in routing, virtual circuit and datagram routing; Classification of routing algorithms; Shortest path algorithms: Bellman-Ford, Dijkstra and Floyd-Warshall; Distributed asynchronous Bellman-Ford algorithm	4
7.	Objectives and means of flow and congestion control, End-to-end and node by node windows, performance analysis and simplified queuing models; Rate control schemes: Time window, modeling and performance of leaky bucket algorithm	3
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	D. Bertsekas and R. Gallager, "Data Networks", 2 nd Edn., Prentice-Hall of India.	1992
2.	A. Kumar, D. Manjunath and J. Kuri, "Communication Networking: An Analytical Approach", Morgan Kaufmann.	2004
3.	M. Schwartz, "Telecommunication Networks: Protocols, Modeling and Analysis", Pearson Education.	1987
4.	W. Stallings, "Data and Computer Communication", 8 th Edn., Pearson Education.	2007
5.	J. Walrand, "Communication Networks", 2 nd Edn., McGraw-Hill.	2009
6.	L. Kleinrock, "Queuing Systems: Theory", 2 nd Edn., Wiley Blackwell.	2008
7.	T.N. Saadawi, "Fundamentals of Telecommunication Networks", Wiley.	2015

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE:

Electronics & Communication Engineering

1. Subject Code: ECN- 614

Course Title: Adaptive Signal Processing Techniques

2. Contact Hours: L: 3

T: 0

P: 2

3. Examination Duration (Hrs.): Theory: 3

Practical: 0

4. Relative Weight:

CWS:10-15PRS: 10-20MTE:20-30

ETE:40-50

PRE: 0

5. Credits: 4

6. Semester: Spring

7. Subject Area: PEC

8. Pre-requisite: Digital Signal Processing.

9. Objective: To acquaint the students with the concepts, algorithms and applications of adaptive signal processing in digital communication systems.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Definitions, assumptions and requirements of adaptive signal processing applicable to different application examples; Linear filter structures; Adaptive beamforming	4
2.	Optimum linear combiner and Wiener-Hopf equations, orthogonality principle, minimum mean square error and error performance surface; Multiple linear regression model; Linearly constrained minimum-variance filter	6
3.	Forward and backward prediction error filters; Levinson—Durbin algorithm; Properties of prediction-error filters; Autoregressive modeling of a stationary stochastic process; All-pole, all-pass lattice filter	8
4.	Steepest-descent algorithm and its stability; Principles of stochastic gradient descent, LMS algorithm and its variants	4
5.	Least Squares method, its efficient implementation: Minimum sum of error squares, normal equations and linear least-squares filters, Singular valuedecomposition, cyclic Jacobi, Householder methods	8
6.	RLS adaptive filtering algorithms;Exponentially weighted RLS algorithm; Kalman filter and its variants; Square-root adaptive filters, adaptive beamforming	8
7.	Implementation examples: Adaptive modeling and system identification, inverse adaptive modeling, equalization and deconvolution, adaptive	4

	control systems, adaptive interference cancellation.	
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	S. Haykin, "Adaptive Filter Theory", 4 th Edn., Pearson Education.	2014
2.	B. Widrow and S.D. Stearns, "Adaptive Signal Processing", 1 st Edn., Pearson Education.	1985
3.	D.G. Manolakis, V.K. Ingle and M.S. Kogon, "Statistical and Adaptive Signal Processing", Artech House.	2005
4.	H. Sayed Ali, "Fundamentals of Adaptive Filtering", Wiley-Interscience, IEEE Press.	2003
5.	P.S.R. Diniz, "Adaptive Filtering: Algorithms and Practical Implementation", 3 rd Edn., Springer.	2008
6.	H. Sayeed Ali, "Adaptive Filters", 1 st Edn., John Wiley & Sons.	2008

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE:

Electronics & Communication Engineering

1. Subject Code: **ECN- 615**

Course Title: **Advanced Coding Theory**

2. Contact Hours: **L: 3**

T: 0

P: 2

3. Examination Duration (Hrs.): **Theory: 3**

Practical: 0

4. Relative Weight: **CWS:10-15PRS: 10-20MTE:20-30 ETE:40-50 PRE: 0**

5. Credits: **4**

6. Semester: **Spring**

7. Subject Area: **PEC**

8. Pre-requisite: **Information and Coding Theory.**

9. Objective: To provide an in-depth study of the design of good forward error correction codes and their efficient decoding.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Introduction to coding for reliable information transmission and storage; Shannon's channel coding theorem, minimum distance principles, error detection and correction capabilities revisited.	2
2.	Introduction to Algebra – Groups, Fields; Binary field arithmetic; Galois Field, construction and properties of GF (2^m); Vector spaces.	7
3.	Linear Block Codes – encoding, syndrome and error detection; Systematic and non-systematic codes; Standard array and syndrome decoding; Probability of undetected error over binary symmetric channel; Some important linear block codes – Hamming, Reed-Muller and Golay codes.	6
4.	Cyclic Codes – Polynomial and matrix description of cyclic codes; encoding of cyclic codes; syndrome computation and error detection; Meggitt decoder, decoding of cyclic Hamming code, Error trapping decoding; Golay, Shortened and Quasi-cyclic codes.	8
5.	Binary primitive BCH codes, Berlekamp's iterative algorithm for BCH decoding; Non-binary BCH codes, Reed-Solomon (R-S) codes, decoding of R-S codes by Berlekamp's algorithm, Frequency domain representation and decoding of R-S codes.	8
6.	Convolutional Codes – generator sequences and matrix description of feedforward convolutional encoder; Systematic encoders; Transform domain representation; Equivalent encoder realizations in Controller canonical form, Observer canonical form and feedback encoder form;	8

	Finite state machine model and Trellis representation of an encoder, Viterbi decoding, Soft-output Viterbi Algorithm (SOVA) and BCJR algorithm.	
7.	Introduction to Turbo and LDPC codes; Iterative decoding of Turbo codes; Trellis coded modulation; Block coded modulation; Automatic Repeat Request (ARQ) strategies.	3
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	S. Lin, and D.J. Costello Jr., "Error Control Coding", 2 nd Edn., Pearson.	2004
2.	R.E. Blahut, "Algebraic Codes for Data Transmission", 2 nd Edn., Cambridge University Press.	2003
3.	W.C. Huffman and V. Pless, "Fundamentals of Error Correcting Codes", Cambridge University Press.	2003
4.	T.K. Moon, "Error Correction Coding: Mathematical Methods and Algorithms", Wiley Interscience.	2005
5.	J. Bierbrauer, "Introduction to Coding Theory", 2 nd Edn., CRC Press.	2016

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE:

Electronics & Communication Engineering

1. Subject Code: ECN- 616

Course Title: Speech and Audio Processing

2. Contact Hours: L: 3

T: 0

P: 2

3. Examination Duration (Hrs.): Theory: 3

Practical: 0

4. Relative Weight: CWS:10-15PRS: 10-20MTE:20-30 ETE:40-50 PRE: 0

5. Credits: 4

6. Semester: Spring

7. Subject Area: PEC

8. Pre-requisite: Digital Signal Processing.

9. Objective: To acquaint the students with the concepts in speech and audio processing, and their applications in communication systems.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Digital speech processing and its applications, production and classification of speech sounds, lossless tube models, digital models for speech signals; Analysis and synthesis of pole-zero speech models, Levinson recursion, lattice synthesis filter.	7
2.	Time dependent processing of speech, pitch period estimation, frequency domain pitch estimation; Discrete-time short-time Fourier transform and its application, phase vocoder, channel vocoder.	6
3.	Homomorphic speech processing, waveform coders, hybrid coders and vector quantization of speech; Model based coding: Linear predictive, RELP, MELP, CELP; Speech synthesis.	9
4.	Principles of speech recognition, spectral distance measures, dynamic time warping, word recognition using phoneme units, hidden Markov models and word recognition, speech recognition systems, speaker recognition.	7
5.	Ear physiology, psychoacoustics, perception model and auditory system as filter bank; Filter bank design and modified discrete cosine transform algorithm for audio compression in MP3 and AAC coders; Standards for high-fidelity audio coding.	7

6.	Tree-structured filter banks, multi-complementary filter banks; Properties of wavelets and scaling functions, wavelet transform; Filter banks and wavelets, applications of wavelet signal processing in audio and speech coding.	6
	Total	42

11: Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	L.R. Rabiner and R.W. Schafer, "Digital Processing of Speech Signals", Pearson Education.	2006
2.	T.F. Quatieri, "Discrete-Time Speech Signal Processing: Principles and Practice", Pearson Education.	2002
3.	S. Furui, "Digital Speech Processing, Synthesis and Recognition", 2 nd Edn., CRC Press.	2000
4.	A. Spanias, T. Painter and A. Venkatraman, "Audio Signal Processing and Coding", John Wiley & Sons.	2007
5.	B. Gold and N. Morgan, "Speech and Audio Signal Processing", John Wiley & Sons.	2002
6.	A.R. Jayan, "Speech and audio Signal Processing", Prentice-Hall India.	2016

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

NAME OF DEPTT./CENTRE:

Electronics & Communication Engineering

1. Subject Code: **ECN- 617**

Course Title: **Image Processing and Computer Vision**

2. Contact Hours: **L: 3**

T: 0

P: 2

3. Examination Duration (Hrs.): **Theory: 3**

Practical: 0

4. Relative Weight:

CWS:10-15PRS: 10-20MTE:20-30

ETE:40-50

PRE: 0

5. Credits: **4**

6. Semester: **Spring**

7. Subject Area: **PEC**

8. Pre-requisite: **Digital Image Processing.**

9. Objective: To acquaint the students with the advanced concepts of digital image processing and computer vision.

10. Details of Course:

S. No.	Contents	Contact Hours
1.	Digital image fundamentals: Simple image model; Sampling and quantization; Imaging geometry, perspective projection, digital geometry; Photometric model in image formation; Brightness, adaptation and contrast; Perception of color, color models.	6
2.	Image processing techniques: Image enhancement; Image restoration; Image registration; Image compression methods – transform coding, block truncation coding, vector quantization; Morphological image processing.	12
3.	Detection and matching of points, patches, lines and edges, Hough transform; Segmentation: active contours, split and merge, normalized cuts, graph cuts and energy-based methods; Dense motion estimation using optical flow; Stereo correspondence; 3-D reconstruction.	8
4.	Feature extraction, representation and description of objects in images: Chain codes, polygonal approximations, boundary segments, skeletons, statistical moments, texture, Fourier descriptors, pattern spectrum.	6

5.	Object recognition – decision theoretic, structural and neural network methods; Bayes' classifier, linear discriminant functions, supervised and unsupervised learning, clustering; Multi-layer perceptron, self-organizing feature map and deep learning; Applications of object recognition in object detection, context and scene understanding, biometric applications.	10
	Total	42

11. Suggested Books:

S. No.	Name of Books / Authors	Year of Publication
1.	R.C. Gonzalez and R.E. Woods, "Digital image Processing", 3 rd Edn., Prentice-Hall.	2008
2.	A.K. Jain, "Fundamentals of Digital Image Processing", Pearson Education, India.	2015
3.	R. Szeliski, "Computer Vision: Algorithms and Applications", Springer.	2010
4.	R.O. Duda, P.E. Hart and D.G. Stork, "Pattern Classification", 2 nd Edn., Wiley India.	2009
5.	B. Chanda and D. Dutta Majumder, "Digital Image Processing and Analysis", Prentice-Hall.	2007

Item No. 74.11: To consider the process of admission in Ph.D. for senior professionals

A committee was formed to recommend the admission eligibility criteria, category nomenclature, process of admission and credit requirements for candidates having long professional experience. The committee presented its report in the 71st meeting of the Senate. The Senate accepted the proposal in principle and suggested some revisions.

The revised report of the committee (**Appendix 'A'**) is placed for the consideration and approval of the Senate.

Report of the Committee for recommending guidelines for admission of candidates with professional experience to Ph.D. degree

It has been observed that candidates having extensive professional experience, sometimes senior professionals in government laboratories / PSUs and renowned private companies apply for admission to the Ph.D. programme at IIT Roorkee as Part-Time/Sponsored/Self-sponsored candidates. Such candidates already have a record of research / professional activities through publications/patents. These candidates, due to having high positions in their organizations and job responsibilities, find it difficult to stay in the campus and do regular course work. These candidates, however, through their vast professional experience, may have the capability of doing research. To facilitate the induction of such candidates in the Ph.D. Programme, the following guidelines are proposed.

1. Candidates working only in government organizations/laboratories, PSUs, and reputed companies should be considered.

2. Eligibility criteria should be as follows:

Candidates having M.Tech./M.Arch./MURP/MBA degree with at least 12 years of professional experience.

OR

Candidates having B.Tech./M.Sc. degree with at least 14 years of professional experience.

3. Candidates should have demonstrated research potential through research papers in reputed journals / patents / technology transfer.
4. The Pre Ph.D. course credit requirement would be as per the current practice for Part-Time candidates.
5. The credit requirement as recommended by the SRC, can be completed in the form of project/dissertation/seminar, NPTEL online courses.
6. There would be no residency requirements for such candidates.
7. Applications in this category can be made throughout the year to the office of Head of the concerned Department. The application should clearly mention the preferred area of work and choice of supervisor (if

any). The candidate would be asked to give a presentation of his professional credentials in the concerned Department. The Head of the Department will seek inputs on the application from the faculty members working in the concerned area. The name of the proposed supervisor along with the recommendations of an extended DRC (with faculty members of the same specialization as special invitees) should be sent to the office of DAA.

The selection would be recommended on the basis of an interview by the following 3-member committee:

- | | | |
|-------------------------------------|---|----------|
| 1. Dean Academic Affairs | - | Chairman |
| 2. Dean SRIC | - | Member |
| 3. Head of the concerned Department | - | Member |

The final approval on the recommendations will be accorded by the Chairman, Senate.

Item No. 74.12: To consider the report of Prof. Manish Shrikhande Committee on Ph.D. Regulations.

The IRC discussed and deliberated on the report of the Prof. Manish Shrikhande Committee on Ph.D. regulations and recommended the same with some modifications. **(Appendices 'A' & 'A1').**

The recommendation of IRC is placed for the consideration and approval of the Senate.

PREAMBLE *(Item No. 60.23, Appendix 'L', dt 08.07.2015)*

Indian Institute of Technology (I.I.T.) Roorkee offers academic programmes leading to the award of Ph.D. degree through its Departments/Centres. The award of Ph.D. degree is in recognition of high academic achievements, independent research and application of knowledge to the solution of technical and scientific problems in Science, Technology, Architecture & Planning, Humanities & Social Sciences and Management; creative and productive inquiry is the basic concept underlying the research work.

The academic programme leading to the Ph.D. degree is broad-based and involves a prescribed course credit requirement and a research thesis. The institute also encourages interdisciplinary areas through a system of Co-supervision and provides excellent opportunities for such programmes. The institute undertakes sponsored research and development projects from industrial and other organizations in the public as well as private sector.

The degree of Doctor of Philosophy shall be abbreviated as Ph.D. The Degree of Doctor of Philosophy is granted for research work in areas recognized by the Academic Departments/Centres of the Institute subject to the conditions and regulations contained hereinafter.

The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts, or development of innovative products and technologies. It shall evince the candidate's capacity for critical examination and sound judgment and shall represent original contribution to the existing knowledge.

The degree of doctor of philosophy (Ph.D.) of the Indian Institute of Technology, Roorkee shall be conferred on a candidate who successfully completes all the requirements specified in these ordinances and regulations, which were approved by Board of Governors/Senate.

ORDINANCES FOR THE DOCTOR OF PHILOSOPHY (Ph.D.) PROGRAMMES

<p>Definitions (Unless the context requires otherwise) (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p> <p><u>(Notification No. Estt (A)/3239/E-2281 dated 31.03.2017)</u></p>	1	(i)	"DRC/CRC" shall mean the Research Committee of the Department/Centre.	<u>Manish Shrikhande Committee</u>
		(ii)	"Applicant" shall mean an individual who applies for admission to the Ph.D. programme of Indian Institute of Technology, Roorkee on a prescribed Application Form.	
		(iii)	"IRC" shall mean the Institute Research Committee of Indian Institute of Technology, Roorkee	
		(iv)	"Candidate" shall mean a person registered for the Ph.D. Degree and who has successfully completed the course requirement, the written and oral comprehensive examinations, and has submitted and presented the research plan and approved as per clauses R.5 and R.6 of the Regulations.	
		(v)	"DA" shall mean the Dean, Academics. "DoAA" shall mean the Dean of Academic Affairs.	
		(vi)	"Research Student" shall mean a person registered for the Ph.D. programme of Indian Institute of Technology, Roorkee before becoming the candidate.	
		(vii)	"Supervisor(s)" shall mean member(s) of the academic staff of the Institute approved by Competent Authority to guide/supervise the research/ academic work of the research student/candidate.	
		(viii)	"Co-supervisor(s)" shall mean member(s) of the academic staff of the Institute or any person from other organization recommended by SRC, DRC, Head of the Department/Centre and approved by Competent Authority to guide/supervise the research/ academic work of the research student/candidate.	
		(ix)	"Caretaker Supervisor" shall mean a member of the academic staff appointed to look after the administrative	

			interests of a research student/candidate in the absence of the Supervisor(s) and after the submission of the thesis, if necessary as per clause R.3.5 of the Regulations.	
	(x)		"Course Work" shall mean courses of study prescribed by the Department/Centre through the Student Research Committee, to be undertaken by a research student registered for the Ph.D. Degree.	
	(xi)		"Degree" shall mean the Degree of Doctor of Philosophy (Ph.D.) of the Indian Institute of Technology, Roorkee.	
	(xii)		"Educational Institution" shall mean those Institutes, which offer Bachelor's or higher Degree.	
	(xiii)		"Institute" shall mean the Indian Institute of Technology, Roorkee (IIT Roorkee).	
	(xiv)		"Full-time Research Student/Candidate" shall mean a person registered for the Ph.D. Degree devoting full time at the Institute for completing the degree requirements.	
	(xv)		"Part time Research Student/Candidate" is a person who is registered for the Ph.D. degree and has been allowed to devote part of his time towards this pursuit.	
	(xvi)		"Registration Period" shall mean the length of time span commencing with the date of initial registration at the Institute.	
	(xvii)		"ODC" shall mean Oral Defence Committee.	
	(xviii)		"Residency" shall mean the minimum period for which a student/candidate must attend the institute.	
	(xix)		"SRC" shall mean Student Research Committee.	
	(xx)		"Sponsored Research Student/Candidate" shall mean a research student/candidate sponsored by an organization /his employer who provides full financial support for doing Ph.D.	
	(xxi)		"Competent Authority" shall mean the Director of IIT, Roorkee or any officer to whom the Director delegates	

			the authority.	
			NOTE: 'HE' & 'HIS' IMPLY 'HE'/SHE' AND 'HIS'/HER' RESPECTIVELY.	
REGISTRATION, APPOINTMENT OF SUPERVISOR AND SRC <i>(Item No. 60.23 Appendix 'L' dt 08.07.2015)</i>	R.1	1.	<p>Fresh research students admitted to the Ph.D. programmes are required to report to the Head of the Department/Centre one week in advance before the scheduled date of opening the Institute. Their registration will also take place one week in advance.</p>	<p>R.1.0 Selection</p> <p>The procedure for shortlisting and selection of candidates to PhD programme shall be decided by the respective department/centre. The list of selected candidates, in the order of merit (with provision for waitlisted candidates), shall be sent to the Dean Academic Affairs by the department/centre within two working days of the date of interview. The list of selected candidates shall be notified by the office of Dean Academic Affairs.</p> <p>R.1.1 Registration.</p> <p>a) New Students: All applicants who have been selected and offered admission to the PhD programme and have accepted the offer should report at the institute on the day as specified in the offer of admission. They should carry all the required documents as specified therein.</p> <p>New entrants, awaiting the results of the qualifying examination, will be allowed to register "provisionally" on submission of a certificate from their institutions to the effect that they have completed all the requirements of the programme. The students should submit self-attested copies of the certificates of having passed the qualifying examination by the last date for document submission as specified in the academic calendar (usually about 8 weeks from the date of registration), failing which the admission</p>

				<p>may be cancelled.</p> <p>b) Old Students: All students are required to register for each (Autumn and Spring) semester for the courses/ thesis credits in consultation with their thesis supervisors. The registration process involves:</p> <ul style="list-style-type: none">• Filling a Course Detail Form (before candidacy)/Progress Report (after candidacy), as specified by the institute,• Depositing prescribed fee and dues, if any. <p>All students who are not on authorized leave must continue to register in every semester till they submit the thesis. If, however, a student is likely to submit his/her thesis within two weeks from the date of registration, he/she need not register in that semester. PhD students who have submitted their thesis and wish to continue their stay in the campus shall continue to register every semester till the defence of thesis. In such cases, the institute assistantship will be admissible, if due.</p> <p>In exceptional cases, the Dean Academic Affairs on the recommendation of the DRC may consider registration beyond the date of late registration. In such a case, the student will be allowed to register without any course credits. The students joining PhD programme, under fellowships other than the institute assistantship, after the last date of registration as specified in the academic calendar should register for the required course credits in the next semester. However, the duration for completing the candidacy requirements shall be counted from the</p>
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				<p>date of admission to the PhD programme.</p> <p>In case the thesis is to be revised and resubmitted for evaluation, the student should register for the current semester at the time of submission of the thesis.</p>
				<p>c) Change of Registration from M Tech/IDD to PhD</p> <p>The candidates pursuing master's programmes in Engineering or Architecture or are in IDD programme from IIT Roorkee having CGPA of at least 8.50 on a 10 point scale (after first year/ completing all courses for IDD) shall have a choice of internal lateral entry to PhD programme.</p>
		2	<p>During the admission process, faculty members who do not have Ph.D scholar under MHRD fellowship working under their supervision, shall be given the highest priority to facilitate reasonable uniform distribution of MHRD scholars amongst the faculty members of Departments/Centres.</p> <p>The candidates are required to give their choice for supervisors based on his/her area of interest and supervisor is allocated to him/her at the time of recommending the candidates for admission. The candidates shall be informed about the supervisor allocated in the admission letter. The candidates shall have to work with the supervisor allocated.</p> <p>Only one MHRD scholar shall be taken by a faculty in a semester, in general. In case, if the faculty member wants to take another MHRD scholar in a semester, no-objection from other faculty members of the concerned academic group is required.</p>	<p>R.1.2 Thesis Supervisor</p> <p>Thesis supervisor shall be allocated as per the process enumerated in Admission Process Part under section XX.YY</p> <p>The list of selected candidates shall be uploaded on the institute web page by the office of Dean Academic Affairs within a day of receiving the information from departments/centres. The selected candidates shall fill their preferences for thesis supervisor on the link provided on the web page and confirm their acceptance of the offer of admission to PhD programme by depositing the requisite fees within the stipulated period, failing which the offer of admission will stand withdrawn and the candidate on the waiting list shall be offered the admission to PhD programme.</p>

<p>(Item No. 63.7 Minutes (Page No. 07) dt 11.01.2016)</p>		3	<p>The research supervisor of a student after the registration shall be approved by the Head of the Department/ Centre. Proforma Ph.D-0, given in Appendix A, is to be filled for the approval of supervisor(s). In case of joint supervision, supervisors shall be approved by the competent authority as determined from time to time.</p>	
		4	<p>The Student Research Committee (SRC) for a research student shall be appointed within a week but not later than a month from the date of initial registration by HoD on the recommendation of supervisor through the Chairman, DRC. The SRC shall consist of:</p> <p>(a) Any Senator from the department (preferably subject area expert but not necessarily from DRC) can be nominated as Chairman SRC. Any senator preferably subject area expert either from the department or outside can be nominated as Chairman, SRC.</p> <p>(b) One expert in the field from the department/centre.</p> <p>(c) One institute faculty expert, preferably in the concerned area, from outside the department/ centre to which the student belongs.</p> <p>(d) Supervisor(s).</p> <p>Proforma Ph.D-I, given in Appendix-A, is to be filled for the appointment of SRC of the candidate.</p> <p>Note 1: Names for 4(b) and 4(c) shall be proposed by the supervisor(s) and nominated by the Chairman, DRC and Head of the Department/Centre.</p> <p>Note 2: Once approved, the member of SRC can be changed only under exceptional circumstances on recommendations from the department by competent</p>	<p>R.1.3 Joining the Departments/Centres and constitution of SRC</p> <p>a) All new entrants in a PhD programme should submit a joining report in the office of Head of the respective department/centre. The departments/centres will send the list of PhD candidates who have joined in the departments/centres in a semester along with the name of supervisor to the Dean Academic Affairs.</p> <p>b) The thesis supervisor shall propose suitable names to constitute the Student Research Committee (SRC) which shall comprise of one internal expert member from within the Department/Centre, one external expert member from outside the Department/Centre, supervisor(s) and one senator as the Chairperson SRC. Member outside the department can also be from outside the institute preferably from CFTI or institute having equivalent status in Research.</p> <p>Once SRC has been constituted by the Head of the Departments/Centres, the SRC will recommend to Dean Academic Affairs for approval of the courses which the student shall register for, taking into consideration the proposed area of research and the academic background</p>

			authority.	of the student.
		5.	Every research student/candidate will be required to carry out online subject registration prior to candidacy during stipulated dates and register for the Ph.D. degree programme every semester till the submission of the thesis irrespective of their category and status. However, after candidacy on-line registration is not required. Proforma Ph.D-III, given in Appendix-A, is to be filled in every semester for the continuation of registration. If there is a revision of thesis, registration is required again at the time of next submission.	Covered in R.1.1
MINIMUM AND MAXIMUM TIME FOR THESIS SUBMISSION (Item No. 60.23 Appendix 'L' dt 08.07.2015) (Item No. 71.15 Agenda (Page No.226))	R.2	(a)	All candidates shall be required to be registered for the entire duration of Ph.D. in every semester till submission of thesis.	R.2.1 Minimum Duration For Thesis Submission For all students the minimum duration of PhD programme before submitting the thesis is TWO years from the date of candidacy. The date of candidacy will be considered as the date on which the research proposal is accepted by the SRC. In case of Part-Time candidates the minimum duration of PhD programme shall be period of candidacy plus 3 years from the date of candidacy.
		(b)	The candidates of all categories shall submit their thesis within a period of five years from the date of their initial registration for the Ph.D. Programme. However, as a special case, this limit may be extended on specific recommendation of SRC to a maximum of six years for Full time research candidate and seven years for Part time research candidate by the competent authority after which the registration shall stand cancelled automatically. However, if the candidate has converted his/her status from full time to part time before the expiry of five years, the maximum duration for thesis submission shall be seven years.	R.2.2 Maximum Duration For Thesis Submission The candidates of all categories shall submit their thesis within a period of five years from the date of their initial registration for the Ph.D. Programme. However, as a special case, this limit may be extended, on specific recommendation of SRC, to a maximum of six years for full time research candidate and seven years for Part time research candidate by the Dean Academic Affairs after
		(c)	For all students the minimum duration for submitting the thesis is TWO years from the date of candidacy. The date of candidacy will be considered as the date on which the research proposal is presented by the student and accepted by the SRC.	

<p>Minutes (Page No.04) dt 22.03.2018)</p> <p>(Item No. 71.16 Agenda (Page No.227) Minutes (Page No.06) dt 28.12.2017)</p>				less than one and a half year before submission of the thesis.
		4.	<p>The maximum number of Scholars supervised by a faculty member at any time at IIT Roorkee shall not be more than 12 jointly or singly or a combination of both with a maximum of 06 MHRD supported scholars.</p> <p>There will not be any limit on the total number of research scholars which can be supervised by a faculty subject to the condition that the research scholars with Institute Assistantship can be maximum 08 (eight) per faculty, singly or jointly or a combination of both. However, this number may be changed by the Senate from time to time.</p>	Retained
		5.	<p>Requirement of Co-supervisor in case of Part-time candidate:</p> <p>a) If the research scholar is registered as full time candidate and later on converted to part time after completing 3 years, co-supervisor will not be required.</p> <p>b) If the research scholar is registered as full time candidate and after completing candidacy joined an organization within 100 km from Roorkee and status is converted to part time, co-supervisor from host organization will not be required.</p> <p>c) If the research scholar is teacher trainee (sponsored faculty) from an institute having MoU with institute, co-supervisor may not be required if there is no possibility of co-supervisor at that institute. However, the candidate has to complete residential requirement for completing the course work and for candidacy and they will have to be present at IIT Roorkee during all vacations for interaction with the supervisor(s).</p>	<p>R.3.2 Change of Registration from Full-time to Part-time Programme</p> <p>A PhD student may be allowed by the Dean Academic Affairs on the recommendations of the DRC/SRC to change his/her status to "Part-time Student" if:</p> <ul style="list-style-type: none"> • He/she has completed all requirements for candidacy, • The DRC approves the organization of employment for continuing the PhD work <p>Retain amended clause as approved by the Senate</p> <p>R.3.3 Change of Registration from Part-time to Full-time Programme</p> <p>The part-time PhD student can change to full-time status</p>

			<p>d) If the research scholar is registered as full time candidate and after completing candidacy joined an organization at a distance of more than 100 km from Roorkee and status is converted to part time, co-supervisor from host organization will required at the time of conversion.</p> <p>An Organization as a whole and not one of its units be considered by DRC while approving change of status from Full-time to Part-time. Further, there shall not be any requirement of obtaining NOC and having a local supervisor will not be mandatory, if the place of job is at distance more than 100 km. from Roorkee.</p> <p>e) If the research scholar/candidate from an organization, at a distance of more than 100 km from Roorkee, is registered as part time candidate in the beginning, co-supervisor will be required from that organization from the beginning.</p> <p>f) In either case of (d) and (e) above, the organization has to give an undertaking that the research scholar will continue to work on project or in area relevant to his/her Ph.D. degree programme.</p>	<p>at any time of the programme provided that he/she has secured a sponsorship or study leave from the parent organization for the intended duration of stay, not less than one semester, without any financial support from the institute.</p>
		6.	<p>Change of Supervisor(s) and Appointment of Caretaker Supervisor for Ph.D. students:</p> <p>A faculty member appointed as a Ph.D. Supervisor(s) is expected to be available to a research student/candidate in the Institute till the thesis is submitted. However, under unavoidable circumstances, such as: long leave of more than 12 months, resignation, retirement, death or change of the</p>	<p>R.3.4 Change/Addition of a Supervisor/Caretaker Supervisor</p> <p>Addition/change of supervisor will be allowed in the following special cases:</p> <p>a) Death of supervisor: A new supervisor will be appointed</p> <p>b) Supervisor retires/is due to retire/resigns: The supervisor becomes joint co-supervisor and a new</p>

			<p>supervisor, a new Supervisor(s) may be appointed following regulations as under:</p> <p>A. Supervisor proceeding on long leave but less than 12 months</p> <p>a. If he/she is the only supervisor for a research student/candidate, a caretaker supervisor may be appointed to look after the administrative interest of the student provided the student has completed the requirement of candidacy. HoD can also act as caretaker supervisor only for administrative purposes and faculty supervisor continues for academic purposes.</p> <p>b. If he/she is the only supervisor for a research student/candidate and the student has yet not completed the requirement of candidacy, a co-supervisor shall be appointed by the SRC.</p> <p>B. Supervisor(s) proceeding on long leave of more than 12 months.</p> <p>a. (i) Where there is more than one Supervisor for a research student/candidate and one of the supervisors is proceeding on long leave for more than 12 months other supervisor(s) shall take care of the candidate. The supervisor proceeding on leave continue to be the supervisor of the candidate, if the candidate has completed the minimum duration of submitting thesis as per clause R.2 (c).</p> <p>(ii) Where only one Supervisor exists for a research student/candidate, another supervisor shall be appointed by the SRC in</p>	<p>supervisor will be appointed</p> <p>c) Supervisor proceeding on leave: A caretaker supervisor will be appointed if the student has been admitted to candidacy, otherwise Joint ee-supervisor will be appointed.</p> <p>d) A student may request for a Joint ee-supervisor, if the absence of supervisor is hampering the progress.</p> <p>e) The caretaker supervisor shall be designated as a Joint ee-supervisor if he/she contributes in carrying out major revision of the thesis during evaluation.</p>
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			<p>cases where SRC has not yet found the research work fit for submission following clause R.8 sub-clause 1d) in the area of his research work.</p> <p>b) (i) If SRC has recommended the research work for submission following clause R.8 sub-clause 1d) before the supervisor proceeds on leave, a caretaker supervisor will be appointed for administrative purpose only.</p> <p>(ii) If the thesis has been submitted before the supervisor proceeds on leave, only a caretaker supervisor will be appointed.</p> <p>(iii) Further, if a major revision becomes necessary, and the supervisor(s) is (are) on leave, he should be asked to specifically state whether he would effectively help the Research Scholar in carrying out the major revisions within a reasonable period. In case the supervisor(s) expresses his/her inability due to one reason or the other, the caretaker supervisor, if he/she provides the required help in carrying out the major revision, will automatically be treated as a <u>co-supervisor</u> of that candidate.</p> <p>c) If a supervisor(s) proceeds on leave for a period less than 12 months initially, but later extends his/her leave beyond 12 months, the above procedure as applicable for leave beyond 12 months, will be followed. The extension granting authority will inform the competent authority accordingly.</p> <p>d) If a new supervisor needs to be appointed in case of supervisor proceeding on long leave,</p>	
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			<p>his/her signature is required before granting leave to the faculty. The existing supervisor will continue as co-supervisor only if the candidate has completed the minimum duration of submitting thesis as per clause R.2 (c).</p> <p>e) If the supervisor(s) proceeds on leave for more than 24 months during the Ph.D. registration of a research student/candidate and in the opinion of SRC, he has not contributed significantly to the thesis, he/she will cease to be the supervisor(s).</p> <p>C. A Supervisor retiring</p> <p>1. A faculty member on retirement may continue as a co-supervisor till the completion of work and submission of thesis by the candidate. Another supervisor shall be appointed as in "B" above in similar circumstances.</p> <p>2. A faculty member who is due to retire within the next two years may be appointed only as co-supervisor and may continue to be the co-supervisor even after his/her retirement provided the SRC is convinced of his availability/continued guidance to the student.</p> <p>D. A Supervisor(s) resigning</p> <p>A new supervisor shall be appointed at the time of acceptance of resignation by a supervisor as in "B" above. However, if the supervisor has associated with the student for TWO years after candidacy, he/she shall continue to be co-supervisor otherwise he/she shall cease to be supervisor.</p>	
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			<p>E. Death of Supervisor(s) A new supervisor(s) shall be appointed on the recommendation of SRC as in "B" above.</p> <p>F. Supervisor(s) declining to supervise Once a supervisor agrees to supervise a student, he/she cannot decline to supervise the student later on.</p> <p>G. Change/drop of Supervisor(s) by the research candidate (a) If the research student has requested for change of supervisor before the admission to candidacy and both the outgoing and incoming supervisors have consented then the change of supervisor will be considered by the competent authority on the recommendation of DRC/CRC.</p> <p>In case, research student wishes to change the area of research with new supervisor, SRC be constituted a fresh.</p> <p>(b) If a research student before admission to candidacy wants to drop one of the supervisors, in case of more than one supervisor, the same will be considered by competent authority on the recommendation of SRC and the HoD. However, a supervisor cannot be dropped by the student after the candidacy.</p> <p>(c) If the candidacy has already taken place</p>	<p>R.3.5 Request for change of supervisor by a research student A PhD student can request the DRC/CRC through SRC for a change of supervisor. The student has to get consent from both parties, namely, the current supervisor and the proposed supervisor, without which the request for change of supervisor cannot be considered by DRC/CRC. In case the DRC/CRC fails to resolve the issue, the Head should convene a meeting of the DFC/CFC to resolve the impasse and send the recommendation to the Dean Academic Affairs.</p> <p>Every effort should be made to salvage the academic programme of the student while protecting the academic rights/intellectual property of the supervisor.</p>
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			<p>and student has requested for change of supervisor but the supervisor is not willing to give NOC, the matter shall be sorted out first in the DRC and then in the DFC at the department level.</p> <p>If the department is unable to resolve the issue then the student has to continue with the same supervisor or leave the Ph.D. programme.</p> <p>H. (a) If a new SRC has been constituted due to change of supervisor and the research area, the new SRC may ask the research student to do more courses related to new research area provided candidacy has not taken place.</p> <p>(b) If the candidacy has already taken place but the research area has changed, the SRC may ask the candidate to appear for written examination, oral examination before going for candidacy again.</p>	
COURSE CREDIT REQUIREMENTS <i>(Item No. 60.23 Appendix 'L' dt 08.07.2015)</i>	R.4	1.	<p>Each research student shall satisfy the credit requirements as given in Table-1 by crediting courses as advised by course supervisor and recommended by SRC. The minimum CGPA requirement for pre-Ph.D. courses will be 7.00 calculated taking all courses recommended by SRC including seminar.</p> <p>Waiving off of course work requirement for the candidates is subject to the following conditions:</p> <p>(a) Candidates with M. Tech./M.Arch./MURP from IITs</p>	<p>R.4 Course Credit Requirements</p> <p>R.4.1 Minimum CGPA and Probation</p> <p>If SRC has recommended courses to be taken as credit or audit, then credit courses will be considered towards calculating CGPA and student should earn AP grade in audit courses. Technical Communication, Communication skills, Language course and Project shall be treated as additional courses to be completed by a candidate if so</p>

<p>(Item No. 72.13 Agenda (Page No.26) Minutes (Page No.05) dt 22.03.2018)</p>		<p>or IISc and M.Sc. from IISERs, MBA from IIMs and having CGPA 8.5 or more.</p> <p>(b) These candidates shall start their PhD within TWO years from the completion of M.Tech./M.Arch./MURP/ M.Sc./MBA.</p> <p>(c) These candidates may be required to do additional course if the SRC recommends to do so.</p> <p>(d) The waiver will be applicable if admission is sought within the relevant stream or discipline with respect to the post-graduate degree based on recommendation of SRC.</p>	<p>felt by SRC. The student should earn a minimum of 7.00 CGPA in course credits to continue for candidacy.</p>
	2.	<p>If any subject-class is having more than 80% research scholars/students, absolute grading be carried out. Proforma Ph.D-II, given in Appendix-A, is to be filled for the approval of courses to be registered by Dean of Academic Affairs.</p>	<p>A student may be permitted to repeat or substitute ANY TWO courses in which he/she has obtained D, E or F grades ONCE in entire programme. A student who could not achieve 7.0 CGPA shall be given one chance to take up more courses in next semester. The SRC may recommend for repeat or substitution of a such courses to the Dean Academic Affairs as soon as possible. The CGPA will be calculated using credits of courses in which the student was awarded best grades, complying with the minimum credits recommended by the SRC. This may be treated as one-time probation. This shall not have any effect on the maximum duration for completing candidacy requirements.</p>
	3.	<p>Each research student has to do all the courses recommended by the SRC in the beginning. If the student could not get the passing grade in any course or the CGPA as calculated in clause R.4.1 is less than 7.00, the student has to leave the programme.</p>	
	4.	<p>SRC may recommend additional course(s) as Audit course(s), if required, in a particular case. A research student is deemed to have fulfilled the requirement of additional course(s) as Audit Course(s) if he/she obtains 'Audit Pass' for successfully completing each of such course(s).</p>	<p>R.4.2 Reduction in Course Credit Requirement</p> <p>The SRC shall carefully examine any case of reduction in course credits and recommend such cases to the Dean Academic Affairs, giving appropriate justification in terms of any relevant post B.Tech./M.Sc./M.A. or equivalent qualification or proven capacity for independent research. In no case shall the reduced credits requirements be less than 14 credits (including 2 credits earned through seminar).</p>
	5.	<p>The pre-Ph.D. courses including Audit course are to be completed successfully in first 1 to 2 semesters by research students having masters degree and in 2 to 3 semesters by research students having bachelor's degree. These semesters are counted from the date of initial registration and this clause is applicable both for</p>	<p>Candidates having B. Tech./Int. M.Sc. degree with Honours courses – ALREDY DECIDED BY SENATE</p> <p>Candidates having M. Tech. Degree from IIT Roorkee –</p>

			<p>full time/part time research students.</p> <p>GIVE AMENDMENT RELATED WAIVER TO STUDENTS WITH HONOURS COURSES</p>	<p>ALREDY DECIDED BY SENATE</p> <p>Candidates with professional/industrial experience of more than 10 years and/or having substantial publication record in peer reviewed international journals may be given exemption in credit requirements based on recommendation of SRC, but have to complete minimum 14 credits (including seminar). Residency may not be mandatory for such candidates.</p>
		6.	<p>The courses offered other than minimum theory courses for the Ph.D. programmes may be Laboratory Courses, Design Courses and Project.</p>	<p>R.4.3 Course Credit Transfer</p> <p>A PhD student who has completed the two year M.Tech / IDD / M.Sc. / M.Arch. / MURP / MBA programme at this institute can transfer a maximum of 9 postgraduate course credits earned during those programmes (other than project, dissertation and labs) towards fulfilment of his/her course requirement for the PhD programme on the recommendation of the SRC and approval of the Dean Academic Affairs, provided these credits were in excess of the minimum requirement for earning the said degree.</p>
		7.	<p>No self-study course shall be offered as part of the requirement of minimum theory courses. However, extra courses may be offered as self-study courses.</p> <p>A. Self-study Courses shall satisfy the following conditions:</p> <ol style="list-style-type: none"> A self-study course should be preferably outside the courses listed in the Courses of Study and offered to a research student/candidate following sub-clause d) below. A course listed in Courses of Study but not offered in a semester due to lack of sufficient number of students registering for it, may be offered as a self-study course in that semester with the prior approval of Dean of Academic Affairs. A course already running in a semester shall not be offered as a self-study course. The SRC shall examine proposals for self-study courses, not listed in the course of study, along with the course contents, textbooks, mode of 	<p>Self-study course is considered in Table.</p>

			<p>assessment and name(s) of the instructor(s) and shall recommend the proposal and the credit to be assigned to Dean of Academic Affairs for his approval.</p> <p>e) All self-study courses shall carry a maximum of four credits.</p> <p>f) A student shall not take more than one self-study course during the entire Ph.D. programme.</p> <p>g) If the supervisor/SRC feels that a course is essential for the student which is not available, the same may be designed by SRC and recommended by the DRC under the code and title "XX-999: Special Topics" and approved by competent authority.</p> <p>B. Seminars shall satisfy the following conditions:</p> <p>a) Seminar in a semester shall be of two credits and every research student must deliver a seminar as a part of course requirement and beyond the minimum limit of credits for course requirement.</p> <p>b) Seminar shall be treated as additional course for the purpose of registration and evaluation.</p> <p>c) Supervisor shall act as seminar coordinator and decide the topic of seminar in accordance with the area of research. Supervisor shall arrange the seminar and forward the grade awarded by the SRC to the competent authority by the end of the semester.</p> <p>d) A student shall not get credits for more than one Seminar during the entire Ph.D. programme.</p> <p>e) All research scholar/students are required to be</p>	Not Commented
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			<p>adjudged for proficiency in English while delivering seminar which is mandatory for everyone. The SRC will give its recommendation alongwith the result of seminar whether the candidate has qualified examination for proficiency in English or not. In case, the candidate's proficiency in English is not found satisfactory, the candidate is required to do a course on Communication Skills.</p> <p>(f) A proforma-III_S is to be filled to send the seminar grade and proficiency in English.</p>																																	
			<table><tr><th colspan="4">Table 1 COURSE CREDIT REQUIREMENTS</th></tr><tr><th>S. No.</th><th>Candidate Having</th><th>Range of Credit Requirements</th><th>Remarks</th></tr><tr><td>1.</td><td>M.Tech, M.Arch./MURP, MCA or M.Tech. (Integrated/ IDD) or Equivalent Degree</td><td><ul style="list-style-type: none">– minimum 3 theory courses or minimum of 9 credits theory courses– should earn 2 more credits by delivering seminar</td><td>Course From the existing M.Tech and/or pre-Ph.D. courses offered by own Deptt./ other Deptts.</td></tr><tr><td>2.</td><td>M.Sc/M.A./M.B. A. or equivalent admitted to Science/ HSS/ Management department</td><td><ul style="list-style-type: none">– 12-15 credits theory courses.– should earn 2 more credits by delivering seminar</td><td>Course From the existing PG level and/or pre-Ph.D. courses offered by own Deptt./ other Deptts.</td></tr><tr><td>3.</td><td>B.Tech. or equivalent, or M.Sc. or equivalent, admitted to anyone of the Engg.</td><td><ul style="list-style-type: none">– 34-38 credits equivalent to credits earned by M.Tech. students– should earn 2</td><td>Course From the existing PG level and/or pre-Ph.D. courses offered by own Deptt./ other Deptts.</td></tr></table>	Table 1 COURSE CREDIT REQUIREMENTS				S. No.	Candidate Having	Range of Credit Requirements	Remarks	1.	M.Tech, M.Arch./MURP, MCA or M.Tech. (Integrated/ IDD) or Equivalent Degree	<ul style="list-style-type: none">– minimum 3 theory courses or minimum of 9 credits theory courses– should earn 2 more credits by delivering seminar	Course From the existing M.Tech and/or pre-Ph.D. courses offered by own Deptt./ other Deptts.	2.	M.Sc/M.A./M.B. A. or equivalent admitted to Science/ HSS/ Management department	<ul style="list-style-type: none">– 12-15 credits theory courses.– should earn 2 more credits by delivering seminar	Course From the existing PG level and/or pre-Ph.D. courses offered by own Deptt./ other Deptts.	3.	B.Tech. or equivalent, or M.Sc. or equivalent, admitted to anyone of the Engg.	<ul style="list-style-type: none">– 34-38 credits equivalent to credits earned by M.Tech. students– should earn 2	Course From the existing PG level and/or pre-Ph.D. courses offered by own Deptt./ other Deptts.	<p>R.4.4 Course Credit Requirements</p> <p>Course credit requirements, which a candidate needs to complete, are given in Table below:</p> <table><tr><th>S N o</th><th>Qualification</th><th>Credit requirements</th><th>Remarks</th></tr><tr><td>1</td><td>M.Tech, M.Arch./MURP, or equivalent</td><td>Minimum 12 credits of P.G. level theory courses and 2 credits of seminar in area of research</td><td>Student can take at most ONE self-study theory course.</td></tr><tr><td>2</td><td>M.Sc/M.A./M. B.A./M.Phil. or equivalent, admitted to Science/ HSS/</td><td>Minimum 16 15 credits of which minimum 12 credits of P.G.</td><td>Student can take at most ONE self-study theory course.</td></tr></table>	S N o	Qualification	Credit requirements	Remarks	1	M.Tech, M.Arch./MURP, or equivalent	Minimum 12 credits of P.G. level theory courses and 2 credits of seminar in area of research	Student can take at most ONE self-study theory course.	2	M.Sc/M.A./M. B.A./M.Phil. or equivalent, admitted to Science/ HSS/	Minimum 16 15 credits of which minimum 12 credits of P.G.	Student can take at most ONE self-study theory course.
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	Disciplines	more credits by delivering seminar											
	Management department	level theory courses and 2 credits of seminar in area of research											
			<p>NOTE : The research scholars having M.Tech./MCA or equivalent degree have to take either minimum three theory courses (irrespective of credits) or minimum 9 credits theory courses (may be two courses, one of 4 credits and another of 5 credits).</p>	3	<table><tr><td>B.Tech. or equivalent, or M.Sc. or equivalent, admitted to any one of the engineering departments/centres</td><td>Minimum of 36 24 credits of which minimum 20 credits of P.G. level theory courses and 2 credits of seminar in area of research</td><td>Student can take at most TWO ONE self-study theory course.</td></tr></table>	B.Tech. or equivalent, or M.Sc. or equivalent, admitted to any one of the engineering departments/centres	Minimum of 36 24 credits of which minimum 20 credits of P.G. level theory courses and 2 credits of seminar in area of research	Student can take at most TWO ONE self-study theory course.					
B.Tech. or equivalent, or M.Sc. or equivalent, admitted to any one of the engineering departments/centres	Minimum of 36 24 credits of which minimum 20 credits of P.G. level theory courses and 2 credits of seminar in area of research	Student can take at most TWO ONE self-study theory course.											
Comprehensive Examination (Item No. 60.23 Appendix 'L' dt 08.07.2015)	R.5	1.	Soon after successfully completing the pre-Ph.D. course requirements, each research student will request through proforma Ph.D-IV, given in Appendix-A, for appearing in a comprehensive examination which has three segments: (i) Written comprehensive examination (ii) Oral comprehensive examination to test comprehension of the research student in the broad area of study, and (iii) Submission of research plan and its oral presentation to SRC, which will examine his/her academic preparation and potential to carry out the proposed research plan.	R.5 Candidacy for PhD The student should apply for the candidacy of PhD once he/she has earned the required course and seminar credits maintaining a CGPA of 7.0 or more. The SRC shall administer a comprehensive examination to test the comprehension of student in the broad subject area of research. The Departments/Centres shall evolve policies regarding the format and evaluation procedure of the comprehensive examination. After clearing the comprehensive examination, the student should present a research proposal before the SRC. The SRC shall									

<p>(Item No. 69.12 Agenda (Page No.25) Minutes (Page No.08) dt 28.07.2017)</p>			<p>Comprehensive examination shall be conducted by the SRC of the research student appointed under clause R.1 sub-clause 4. The comprehensive examination method has to be governed by DRC. The student having Masters degree or Bachelors degree has to present the research proposal within the stipulated time frame of 45 18 months or 20 24 months respectively from the date of initial registration. It is applicable to both Full Time and Part Time research scholar.</p> <p>The syllabus for comprehensive written and oral examination is to be defined by SRC including the courses student has completed as pre-PhD courses and approved by Chairman, DRC.</p>	<p>recommend the student's admission to the candidacy if the research proposal is acceptable. The student will be given two chances to clear the comprehensive examination. The syllabus for comprehensive examination is to be defined by SRC. Progress report of PhD scholar for the candidacy will be submitted by SRC through prescribed proforma along with comprehensive examination report for the approval of Dean Academic Affairs.</p> <p>The student having M.Tech., M. Arch/MURP, MCA or M Tech (Integrated/IDD) or equivalent degree or M.Sc./M.A./M.B.A. or equivalent admitted to Science/HSS/Management department has to complete the requirements of candidacy within the stipulated time frame of 18 months from the date of initial registration.</p> <p>The student having B.Tech. or equivalent degree or M.Sc. or equivalent admitted to anyone of the Engg. Disciplines has to complete the requirements of candidacy within the stipulated time frame of 24 months from the date of initial registration.</p> <p>It is applicable to both full time and part time.</p>
			<p>2. On the basis of the performance of student in the comprehensive examination, SRC will make one of the following recommendations under each of a), b) and c), to the Dean of Academic Affairs:</p> <p>a) Written comprehensive examination</p> <ul style="list-style-type: none"> (i) passed (ii) to reappear in the written comprehensive examination after a certain period of time specified by the SRC and/or after taking additional courses recommended by it, if any. (iii) failed <p>b) Oral comprehensive examination</p> <ul style="list-style-type: none"> (i) passed (ii) to reappear in the oral comprehensive examination after a certain period of time specified by the SRC. (iii) failed 	

<p>(Item No. 63.15 Minutes (Page No.12) dt 11.01.2016)</p>			<p>c) Research plan and its oral presentation</p> <p>(i) approved</p> <p>(ii) not approved</p>	
		3.	<p>Oral examination shall be conducted only after successful completion of written examination i.e., the student has secured at least 'B' grade (or 64% marks) in written examination. The minimum passing grade in Comprehensive Written Examination shall be 'C+' ($64 \leq C+ \leq 72$). It was also decided that in Comprehensive Oral Examination, no grade be awarded.</p>	
		4.	<p>Research proposal shall be presented before the SRC only if the student has successfully cleared the oral examination, i.e., the student has been declared passed.</p>	
		5.	<p>Notifications for different components of comprehensive examination shall be issued separately through proforma Ph.D-V, given in Appendix-A, and only after the successful completion of previous component(s).</p>	
		6.	<p>Report on Comprehensive Examination - written and oral and Candidacy for Ph.D. Degree will be submitted by SRC through proforma Ph.D-VI, given in Appendix-A.</p>	
		7.	<p>Progress report of Ph.D scholar for the candidacy will be submitted by SRC through proforma Ph.D-VII, given in Appendix-A, alongwith comprehensive examination report for the approval of Dean of Academic Affairs.</p>	
		8.	<p>At the time of presentation of research proposal, SRC/DRC may identify the ISI/Scopus indexed journals of his/her proposed area where publication is required.</p>	

		NOT E:	A student will be provided a maximum of two attempts to qualify in each segment of the comprehensive examination, to obtain the SRC recommendation of 2.a(i), 2.b(i) and 2.c(i). However, two failures in any of the comprehensive examinations will require a student to leave the programme.	
ELIGIBILITY FOR THE CANDIDACY <i>(Item No. 60.23 Appendix 'L' dt 08.07.2015)</i> <i>(Item No. 69.12 Agenda (Page No.25) Minutes (Page No.08) dt 28.07.2017)</i>	R.6	1.	<p>The Dean of Academic Affairs will approve admission of a research student to candidacy on the recommendation of SRC which will satisfy that a research student has fulfilled the following:</p> <ul style="list-style-type: none"> a) completed the required course work; b) passed the written and oral comprehensive examinations; c) submitted a research plan and defended it to the satisfaction of SRC. <p>Thereafter, the research student will be admitted to candidacy from the date on which SRC recommended and be called a research candidate.</p>	ALREADY DISCUSSED IN R.5
		2.	<p>If a research student fails to get admission to candidacy as below then his/ her registration for the Ph.D. Programme will be terminated.</p> <ul style="list-style-type: none"> (a). For Ph.D. students with M.Tech./M.Arch./ MURP/ MCA/ M.Tech. (Integrated/IDD) or equivalence degree and M.Sc. /MA/ MBA or equivalent admitted to Science /HSS/ Management department: 18 months. (b). For Ph.D. students with B.Tech. or equivalent or M.Sc. degree or equivalent admitted to Engineering discipline: 24 months. 	

			With a rider that last six months shall be devoted to non-course related activities of Ph.D. programme such as comprehensive exam (Written/Oral) and research proposal for candidacy.	
RESEARCH PERFORMANCE MONITORING (Item No. 60.23 Appendix 'L' dt 08.07.2015)	R.7	1.	The research progress of each research candidate in each semester will be monitored by the supervisor(s), who will assess the performance to be 'satisfactory' or 'unsatisfactory' at the end of each semester. For this purpose, each research candidate will be asked to submit a progress report to the supervisor(s) by the dates stipulated in R11.6.	R.6 Performance Monitoring The student should deliver an annual progress seminar in the month of July-August each year and submit a report to the SRC. The report should include the work done so far and should specify the progress made in the intervening period. The SRC shall submit its report on the continuation of the student in PhD programme and continuation of assistantship in a prescribed proforma to the Dean Academic Affairs at the earliest. Half-Yearly report will be sent by SRC without conducting a presentation. Two consecutive unsatisfactory reports will result in the termination of the programme.
		2.	In addition, the candidate shall have to give seminar once in an academic year before the SRC for progress evaluation. If the candidate has been admitted in July, the seminar presentation has to be completed by July 15 of the next year and if the candidate has been admitted in January, the seminar presentation has to be completed by December 31 of the same year.	
		3.	The supervisor(s)/SRC shall forward the recommendation regarding the performance of the research candidate to the Chairman, DRC/CRC before the beginning of the next semester. The Chairman, DRC/CRC will forward the recommendation to the competent authority for necessary action.	
		4.	The progress of a research candidate in each semester is evaluated as 'satisfactory' or 'unsatisfactory' by the supervisor(s)/SRC and forwarded to competent authority through Chairman DRC and Head of the Department/Centre.	
		5.	If the progress is evaluated as 'unsatisfactory' by the supervisor(s) for the first time, a warning will be issued to the Research Candidate by the competent authority.	

		6.	If the performance is evaluated unsatisfactory in two consecutive semesters to a research candidate, his/her registration for Ph.D. programme will stand terminated.	
		7.	<p>A special meeting of SRC may be called by the supervisor(s) at any time during the entire period of Ph.D. for the following:</p> <ol style="list-style-type: none"> Any type of change of topic or research area. Addition or deletion of supervisor. To consider the request of student for doing work in industry or in some other institute for a short period. To consider the extension of period To consider the enhancement of fellowship or change of status from JRF to SRF. <p>Proforma Ph.D-VIII need to be filled every time by the SRC for the approval of Dean of Academic Affairs.</p>	<p>R.7 Special SRC Meeting</p> <p>A special meeting of SRC may be convened for considering the following cases:</p> <ul style="list-style-type: none"> Any change in topic or research area; Addition or deletion of supervisor; Change of status/category; Short term leave to take up studies outside the institute; Extension of PhD duration and institute assistantship <p>The SRC recommendations in the prescribed proforma should be sent to Dean Academic Affairs for the approval.</p>
<p>THESIS SUBMISSION (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p> <p>(Item No. 71.15 Agenda (Page No.226) Minutes (Page No.06)</p>	R.8	1.	<p>a) A candidate is required to publish at least two papers or accepted for publication in refereed journal(s) of repute (preferably journals included in SCI) as decided by the SRC at the time of presentation of research proposal or at least one patent filed.</p> <p>Eligibility criteria for submission of thesis regarding minimum duration of submission and number of papers to be published shall be as per the</p>	<p>R.8 Submission of Thesis</p> <p>When the supervisor and the PhD candidate are of the opinion that the research work as planned in the research proposal has been completed then the supervisor should arrange for a meeting of SRC. At this stage, it is expected that the PhD student has already published (or, accepted for publication) at least TWO papers out of which ONE paper should be in a refereed journal. Papers can be in a conference of repute as endorsed by the SRC. The PhD</p>

<p>dt 28.12.2017)</p>		<p>Ordinances & Regulations in force at the time of admission.</p> <ul style="list-style-type: none"> b) When the supervisor is of the opinion that the research work as planned in the research proposal has been completed and the quality of work is up to the mark for submission of Ph.D., he/she will ask the research candidate to prepare a draft copy of the thesis and submit to the Chairman, SRC with the request to convene the meeting of SRC. c) The candidate shall submit 8 2 soft bound copies and one soft copy of the synopsis after the SRC recommends submission of synopsis. d) The research candidate will deliver a seminar on his/her research work and the seminar shall be adequately notified by the Chairman, SRC, so as to enable interested staff members and students to attend it. If the SRC is satisfied about the quality of the work and considers it fit for submission as a Ph.D. thesis, it will send its recommendation to competent authority along with five soft bound copies and one soft copy of the synopsis and the proposed panel of examiners. Proforma Ph.D-IX, given in Appendix-A, is to be filled by the supervisor(s) to be sent for the approval of Dean of Academic Affairs. e) At the time of delivery of seminar for pre-submission, student has to present the rough draft of the thesis to the SRC. f) If candidate feels that supervisor is not allowing him/her to submit thesis, the student can approach Chairman SRC or HoD and request to convene the special meeting of SRC to consider the work done 	<p>student shall submit a draft copy of the thesis to the SRC members at least 15 days prior to the scheduled meeting. The PhD student will present his/her research work to the SRC and if the SRC is convinced and considers it fit for submission as a Ph.D. thesis, it will send its recommendation to Dean Academic Affairs in a prescribed form. The supervisor may verify the availability of potential examiners for evaluating the thesis before recommending the names for panel of examiners. The panel of examiners shall have names of researchers / faculty from eminent organisations spanning all over the world. Ten examiners may be suggested by the SRC.</p> <p>The PhD student should submit the thesis within four months of SRC recommendation for submission of thesis. One time extension upto four months may be granted by the Dean Academic Affairs, on the recommendations of the SRC. The thesis, synopsis and the panel of examiners should be submitted as PDF files.</p>
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<p>(Item No. 66.16 Minutes (Page No.08) dt 11.08.2016)</p>			<p>by, him/her. The candidate may or may not be allowed to submit thesis by the SRC.</p> <p>The research candidate shall be required to submit his thesis within 04 months of SRC recommendation for submission of thesis. However, in case a candidate fails to submit his/her thesis within the stipulated time and has suitable justification for the same, the competent authority may, on recommendations made by the SRC and DRC and on individual merits of each case, grant him/her extension in time beyond more than four more months, i.e. the candidate may be allowed to submit his/her thesis within a period not exceeding 08 months from the date of SRC meeting recommending submission. No further extension will be given beyond 08 months for the submission of thesis.</p>	
			<p>2. Panel of Examiners</p> <p>A panel of at least ten experts in the area of the Ph.D. thesis would be suggested by the supervisor(s) and recommended by the SRC while forwarding its recommendation for submission of thesis. The panel so recommended would include at least 50% of the examiners from outside India and be out of the bibliography list of references as submitted by the candidate with synopsis with one reference of each expert in cited journal. Any person working in the laboratory(ies)/ Institution(s) where the research candidate or supervisor(s) from outside the institution, if any, is employed, cannot, however, appear in the panel of examiners. Any person related to the candidate or supervisor(s) should not appear in the panel of examiners.</p>	

		3.	<p>Board of Examiners</p> <p>On receipt of the recommendation of SRC for submission of thesis along with synopsis and panel of examiners, the Dean of Academic Affairs will seek consent of the examiners and appoint the Board of Examiners for each research candidate. The Board will consist of internal examiners - the Supervisor(s), and three external examiners – two from within India and the other from abroad, who shall be experts in the subject of the thesis except for cases covered under clause R.8.2 (b). These external examiners shall be chosen from the panel of examiners recommended by the SRC.</p> <p>The supervisor has already gone through the thesis submitted by his/her student and approved the submission, the supervisor will not be asked to evaluate the thesis again. The thesis shall be evaluated only by the Indian and Foreign Examiners as per existing rules.</p>	
		4.	<p>Submission of Thesis</p> <p>(i) The thesis shall be written in English in the specific format available in the office of Dean of Academic Affairs / Department. The specifications of the thesis are given in Proforma Ph.D-X, given in Appendix-A.</p> <p>(ii) The thesis shall contain a critical account of the candidate's research. It should be characterized by discovery of facts or fresh approach towards interpretation of facts and theories or significant contribution to knowledge or development of innovative products and technologies or a combination of these. It should bear evidence of the candidate's capacity for analysis and</p>	

			<p>judgment as well as his ability to carry out independent investigation, design or development.</p> <p>(iii) The Ph.D. thesis must contain the following copyright certificate in the beginning of the thesis, on a separate page on the left side:</p> <p style="text-align: center;">© INDIAN INSTITUTE OF TECHNOLOGY, ROORKEE, 200.. ALL RIGHTS RESERVED</p> <p>(iv) The research candidate shall submit initially n+4 copies of the thesis in a spiral bound form with a soft cover, where 'n' is the number of supervisor(s), and also a soft copy (pdf file) on a CD. One copy each is for office record, for foreign examiner, for Indian examiner and for supervisor(s).</p> <p>(v) The candidates declaration page will have signature of only the student and supervisor(s).The format of the declaration page will have the format as given in proforma Ph.D- XI-A, given in Appendix-A.</p> <p>(vi) The candidate will have to fill proforma Ph.D- XII, given in Appendix-A, for the submission of thesis.</p>	
<p>THESIS EVALUATION (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p> <p>(Item No. 71.15 Agenda (Page</p>	R.9	1.	<p>The thesis will be sent to the examiners by the office of the Dean of Academic Affairs with the request for a detailed assessment report and his/her recommendations on the prescribed proforma within a period of six weeks of the date of receiving the thesis.</p> <p>Criteria to be adopted for evaluation of thesis shall be as</p>	

<p>No.226) Minutes (Page No.06) dt 28.12.2017)</p> <p>(Item No. 68.13 Appendix 'D' Minutes (Pg No. 23- 26) dt 02.03.2017)</p>			per the Ph.D. Ordinances & Regulations in force at the time of submission of the thesis.	
		2.	<p>a) Examiners will examine the thesis individually with a view to judge that the thesis is a piece of research work characterized by;</p> <ul style="list-style-type: none"> i) The discovery of facts, or ii) A fresh approach towards interpretation and application of facts or theories, or iii) Development of innovative products and technologies <p>b) Each examiner will send detailed comments on the research work along with a clear recommendation stating one of the following:</p> <ul style="list-style-type: none"> (i) The thesis is satisfactory and recommended for the award of Ph.D. degree, or (ii) The thesis is recommended for the award of Ph.D. Degree subject to the candidate giving satisfactory answers to queries specifically mentioned in the report at the time of oral defence, or (iii) The thesis is recommended for the award of Ph.D. Degree subject to the candidate revise the thesis as per suggestions made and presents during oral defence, or (iv) The candidate is required to resubmit the thesis in the revised form, as per suggestions made and the thesis be sent for re-evaluation. (v) The thesis is rejected. 	
		3.	The Dean of Academic Affairs will, on the basis of the recommendations of the examiners will take one of the following actions:	

			<p>i) If all the examiners recommend acceptance of the thesis, their recommendations shall be accepted.</p> <p>ii) If out of three external examiners, two external examiners (Foreign and one of the Indian) have sent the report in time and recommend the acceptance of the thesis and all internal examiners also recommend acceptance of the thesis, their recommendation may be accepted. However, the academic section shall wait till the last date of sending the reports by all external examiners from the date of dispatch of Ph.D. thesis (i.e., 6 weeks as given in R.9.1 above) and after that give at least one reminder to examiner to send the report in next 4 weeks.</p> <p>If out of three external examiners, two external examiners (Foreign and one of the Indian) have sent the report in time and recommend the acceptance of the thesis, their recommendation may be accepted. However, the academic section shall wait till the last date of sending the reports by all external examiners from the date of dispatch of Ph.D. thesis (i.e., 08 weeks) and after that give at least one reminder to examiner to send the report in next 4 weeks.</p> <p>iii) If the report of one out of two external examiners (received till last date) is negative, the report of third examiner is must.</p> <p>iv) In case reports have come from both the Indian examiners, any one of them may be included in the examination board for viva-voce examination.</p> <p>In case reports have come from both the Indian Examiners and both have given the same recommendations, any one of them may be</p>	
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			<p>included in the examination. However, if the recommendations of Indian examiners are different, the one who has raised the queries or asked to revise the thesis as per suggestions made by him/her and presents during oral defence shall be included in the examination board.</p> <p>v) If majority of the external examiners recommend rejection, their decisions would be accepted. The candidate may, however, be allowed to resubmit the thesis at least after one year, provided the title of the thesis remains unchanged. Normal procedure will be followed for the evaluation of the resubmitted thesis. In case of resubmission of the thesis, a fresh fee for the examination shall be paid by the candidate. No candidate shall be allowed to resubmit the same thesis for more than once.</p> <p>If any of the examiners recommends rejection, his/her decision would be accepted. The candidate may, however, be allowed to resubmit the thesis at least after one year, provided the title of the thesis remains unchanged. Normal procedure will be followed for the evaluation of the resubmitted thesis. In case of resubmission of the thesis, a fresh fee for the examination shall be paid by the candidate. No candidate shall be allowed to resubmit the same thesis more than once.</p> <p>vi) If more than one examiner recommends rejection, the candidate's replies to the comments made by the examiners shall be sent to these examiners and their clear verdict sought. The examiners may then recommend acceptance, rejection or revision</p>	
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			<p>of the thesis.</p> <p>In case the thesis is accepted, sub-clause 3(i) above will be applicable. In case of recommendation for revision, sub-clause 3(vii) below will apply. However, if these examiners still recommends rejection, alternate examiners would be appointed from the panel of the examiners recommended by SRC by the Dean of Academic Affairs. In such cases sub-clause 4(viii) will apply.</p> <p>If one or more examiners recommend rejection, the candidate's replies to the comments made by the examiners shall be sent to these examiners and their clear verdict sought. The examiners may then recommend acceptance, rejection or revision of the thesis.</p> <p>In case the thesis is accepted, sub-clause 3(i) above will be applicable. In case of recommendation for revision, sub-clause 3(vii) below will apply. However, if these examiners still recommends rejection, alternate examiners would be appointed from the panel of the examiners recommended by SRC by the Dean of Academic Affairs. In such cases sub-clause 4(viii) will apply.</p> <p>vii) In case some examiners recommend revision of the thesis, the thesis would be revised normally within one year, if the candidate so desires. The revised version of the thesis with new date of submission on thesis would be sent to all the examiners for their recommendations.</p> <p>If the candidate does not agree for revision, he may ask for appointment of another examiner(s) under sub-clause 4(viii) below.</p>	
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		<p>viii) A new examiner, if appointed, shall be Indian or Foreign depending on whether the thesis was rejected/to be revised on the recommendation by an Indian or a Foreign examiner in the first instance. The reports of all the examiners will be sent to the new examiner without revealing the identity of the previous examiners, along with the response of the candidate, if any, to the grounds for such recommendation as given in the detailed comments. The thesis shall be deemed to be acceptable if majority of the examiners including the new examiner recommend acceptance. If the newly appointed examiner recommends revision, the thesis would be suitably revised and resubmitted at least after 3 months and sent for examination to all the examiners except the ones in whose place the new examiner was appointed. In case the newly appointed examiners recommend rejection or their recommendations for revision is not accepted by the candidate, the thesis would be rejected. The candidate may then avail the benefit of sub-clause 3(v) above.</p> <p>A new examiner, if appointed, shall be Indian or Foreign depending on whether the thesis was rejected/to be revised on the recommendation by an Indian or a Foreign examiner in the first instance. The reports of all the examiners will be sent to the new examiner without revealing the identity of the previous examiners, along with the response of the candidate, if any, to the grounds for such recommendation as given in the detailed comments. The thesis shall be deemed to be acceptable if all the examiners including the new</p>	
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examiner recommend acceptance.

If the newly appointed examiner recommends revision, the thesis would be suitably revised and resubmitted at least after 3 months and sent for examination to all the examiners except the ones in whose place the new examiner was appointed.

In case the newly appointed examiners recommend rejection or their recommendations for revision is not accepted by the candidate, the thesis would be rejected. The candidate may then avail the benefit of sub-clause 3(v) above.

~~ix) If the majority of examiners recommend revision of the thesis, the candidate may revise the thesis accordingly and resubmit it within a period of one year for the evaluation by the same set of examiners.~~

~~x) If there is no clear majority opinion and there are recommendations for rejection by some examiners and also, revision of the thesis by some other examiners, the candidates may revise the thesis and resubmit it within a period of one year, for evaluation by the same set of examiners.~~

If there are recommendations for rejection by some and also, revision of the thesis by some others, the candidates shall revise the thesis and resubmit it within a period of one year, for evaluation by the same set of examiners.

xi) Any doubt arising out of following the procedure laid down in clause R.9.3 shall be referred to the Director for a decision.

			<p>xii) In case of ambiguous recommendations by the examiner(s), Dean of Academic Affairs will approach the examiner(s) for a clear recommendation. In case clear recommendation is not forthcoming, the matter may be referred to the Director for his decision.</p> <p>xiii) In case any examiner gives comments to be incorporated in the thesis and also states that the revised thesis need not be sent again to him / her, the revised thesis will not be sent to the examiner. The supervisor(s) shall certify that the comments have been incorporated, before the viva-voce examination. (in view of clause R.9.2 (b) (iii) included in the revise rules.)</p>	
ORAL DEFENCE OF THESIS <i>(Item No. 60.23 Appendix 'L' dt 08.07.2015)</i>	R.10	1.	<p>If the thesis is recommended for the award of Ph.D. degree, the candidate shall be required to defend his / her work / thesis orally (Oral Defence) before a duly constituted committee hereinafter referred to as the Oral Defence Committee (ODC). The Dean of Academic Affairs shall request the thesis supervisor and Chairman, SRC to arrange the conduct of oral thesis defence. The copies of the report of the thesis examiners shall be sent to the supervisor with the request to provide them to the candidate so that he/she may prepare to answer the queries raised in the report during oral defence. The oral thesis defence shall be adequately notified so as to enable interested staff members and students to attend it.</p>	R.9 Evaluation and Defence of Thesis <p>The thesis shall be sent to three examiners for evaluation and the student will be asked to defend his/her thesis in front of the Oral Defence Committee (ODC), if any two of the three examiners recommend acceptance of the thesis. The ODC shall consist of the Head of Department (or, nominee), Chairperson SRC ORC (or, nominee), the external examiner, and SRC members. Once the ODC is satisfied with the defence of PhD student, it will record its recommendations in the prescribed form and communicate it to the Dean Academic Affairs. The PhD student has to incorporate all the suggestions given by the examiners in the thesis and present a compliance report of the same. A revised thesis incorporating all suggestions should be submitted</p>
		2.	<p>(i) The ODC shall be chaired by the Head of the department / centre or his nominee and shall consist of Chairman SRC, supervisor(s) and one Indian external examiner. The Chairman, SRC and</p>	

			<p>the supervisor(s) in the capacity of internal examiner(s) shall arrange for the oral defence of the candidate and the Head of the department/centre will notify it. The oral defence of the thesis of the candidate shall be arranged as early as possible and normally within two months from the date of receipt of communication from the Dean of Academic Affairs for holding the viva-voce examination.</p> <p>(ii) The Dean of Academic Affairs will decide that out of two Indian external examiner who should be included in the panel of examiners for ODC.</p> <p>(iii) In case of the inability of the supervisor to arrange the conduct of the oral defence of the thesis due to any reason whatsoever, the Dean of Academic Affairs may appoint Chairman, SRC or internal expert, as recommended by Head of the Department/Centre concerned, another Internal Examiner for oral defence of the thesis. In such cases also, the Ph.D. work will be deemed to have been carried out under the guidance of the supervisor only.</p>	<p>along with the report of the ODC. Thesis shall be signed by Student and the Supervisor.</p>
		3.	<p>a) In case of non-availability of the Indian External Examiner in conducting the viva-voce examination, the Dean of Academic Affairs may appoint another examiner to conduct the oral defence of the thesis from the panel of Indian examiners recommended by SRC.</p> <p>If need be, the SRC may suggest a fresh panel of examiners.</p> <p>b) The examiners in Oral Defence Committee (ODC) shall be provided with the comments made by the</p>	

		<p>examiners before the oral defence.</p> <p>c) If there is a difference of opinion among the viva-voce examiners in Oral Defence Committee (ODC), the recommendations of the ODC will be put up to the Director for a decision who may either direct that a fresh oral defence be held with a new ODC or recommend acceptance or otherwise to the Senate.</p> <p>d) On the completion of the oral defence, the Oral Defence Committee shall recommend to the Dean of Academic Affairs, one of the following courses of action:</p> <ul style="list-style-type: none">(i) that the degree be awarded;(ii) that the candidate be re-examined at a later specified time in a specified manner; <p>The Oral Defence Committee shall also provide to the research candidate a list of all corrections and modifications in the thesis (if required) including suggestions made by the examiners during the thesis evaluation.</p> <p>The second oral defence may be held in case of (ii) normally after a period of 3 months.</p> <p>Any other matter not explicitly provided herein or of an exceptional nature, may be referred to the Director for his decision.</p> <p>e) After the successful completion of oral defence, the candidate is required to make all the changes suggested by the examiners or members of viva defence committee.</p> <ul style="list-style-type: none">(i) The final submission of thesis shall be in hard bound form incorporating all the changes in the	
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		<p>thesis after successful completion of oral defence. The candidate declaration page will have the format as given in proforma-XI-B, given in Appendix-A.</p> <p>(ii) The candidate's declaration page in the final thesis will have the signature of the candidate, supervisor(s), Indian examiners and Chairman, SRC. The supervisor will take the signature of all the members of Oral Defence Committee on required number of sheets at the time of viva-voce examination to be place in the final thesis.</p> <p>(iii) Before signing the thesis in the hard bound form, the supervisor(s) will certify that the candidate has made all the changes as suggested by the examiner(s).</p> <p>(iv) The research candidate shall prepare n+2 copies of the final thesis in hard bound, where 'n' is the number of supervisor(s), after successful completion of Oral Examination. One copy each is for Central Library, Departmental Library and for supervisor(s).</p> <p>(v) One copy of the thesis shall be given to each supervisor(s) by the candidate.</p> <p>(vi) One copy of thesis shall be submitted in Departmental Library by the candidate to get 'No Dues' from the Departmental Library.</p> <p>(vii) The candidate shall submit one copy of thesis meant for Central Library, synopsis of the thesis, additional one page synopsis for Hindi translation, 'No Dues' certificate and a soft copy (pdf file) on a CD to supervisor(s) for sending to Academic Section.</p> <p>(viii) Supervisor will send the above alongwith</p>	
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			Report of the thesis to Academic Section for approval of the competent authority.	
AWARD OF Ph.D. DEGREE (Item No. 60.23 Appendix 'L' dt 08.07.2015)	R.11	1.	<p>The Degree of Ph.D. shall be awarded by the Senate, provided that:</p> <ol style="list-style-type: none"> The Oral Defence Committee so recommends; The candidate produces a 'No dues Certificate' in the prescribed form. The candidate has submitted one soft and two hard cover copies of the thesis; one for the Library of the Department/Centre and the other for the Central Library. The thesis should incorporate all necessary/ corrections/ modifications listed by the Oral Defence Committee (ODC). 	
FINANCIAL ASSISTANCE (Institutional Assistantship) (Item No. 60.23 Appendix 'L' dt 08.07.2015)	R.12	1.	<ol style="list-style-type: none"> Those students who are admitted on full-time basis are considered for the award of Institutional MHRD Assistantship of the amount as decided by the Government of India from time to time, under specified terms and conditions. The students getting Institute MHRD Assistantship will provide 8-10 hours of assistance per week in teaching, laboratory development, and research. The total number of MHRD assistantships in a department will be as decided by the institute from time to time. 	<p>Assistantships are awarded on a semester to semester basis for a period of up to five years for PhD students. A student is expected to devote up to eight to ten hours per week towards job(s) assigned to him/her. The renewal of assistantship is contingent on the student's satisfactory performance in the academic programme and in the discharge of assistantship duties.</p> <p>Project fellows may be offered institute assistantship after the expiry of project funding for a maximum cumulative period of five years (project funding + institute assistantship) in PhD programme. These assistantships will be over and above any limit/quota of institute assistantships for Departments/Centres.</p> <p>Financial assistance will not be available from the institute to candidates who are recipients of the fellowship awards</p>

<p>(Item No. 69.32 Agenda (Pg No. 139-140) Minutes (Pg No. 12) dt 28.07.2017)</p>				<p>from UGC/CSIR/DST/ICMR/DBT, etc. ALREADY TALKED IN PART-I</p>
		2.	<p>The maximum duration for which assistantship can be awarded to any Ph.D. research student is 4 years for MHRD and UGC/CSIR fellows or till the end of the semester in which the thesis is submitted, whichever is earlier. Continuation of the fellowship is contingent on satisfactory academic and research performance and satisfactory performance in the discharge of responsibilities for assistance assigned under the scheme.</p> <p>IITR Assistantship to research scholars may be extended up to the viva-voce Examination on the recommendation of supervisor. This is subject to their registration in those semester(s). However, in any case, the assistantship cannot be given beyond five years as per the guidelines of MHRD.</p> <p>MHRD or UGC/CSIR fellowship can be given to the students in the 5th year provided the SRC or the three member assessment committee respectively strongly recommends with a justification for fellowship after the candidate delivers a seminar before the committee, to show progress. The committee has to specify the date beyond 4th year upto which fellowship can be given.</p> <p>It is to be noted that admission to the Programmes and award of assistantship are not linked. Admission to any programme does not guarantee the award of fellowship/ assistantship. Those who are not awarded assistantship can continue with the programmes as a self financing student.</p>	

<p>TUITION FEE WAIVER TO Ph.D. STUDENTS (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p>	<p>R.13</p>		<p>Tuition Fee Waivers is given to research students/ candidates following the policy of the Government of India, Ministry of Human Resource Department.</p>	<p>Tuition fee waiver as per Government of India guidelines.</p>
<p>LEAVE AND ATTENDANCE (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p> <p>(Notification No. Acad./1814/UG-15 dated 20.11.2015)</p>	<p>R.14</p>	<p>A research student/candidate will be entitled to avail leave as approved by the Head of the department/centre following Leave Rules/Attendance Rules formulated and amended from time to time by the Senate. Presently these are as under:</p> <p>1. Leave Rules A full-time research student/candidate, during his/her stay at the Institute will be entitled a total of 30 days leave per academic year, in addition to Public Holidays including leave on medical grounds, for 8 days casual leave and 15 days vacation leave including leave on medical grounds in an academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacation. The leave due can be carried over to the next year and accumulated up to 90 60 days.</p> <p>Leave beyond 30 15 days in an academic year may be granted to a Research student/ candidate in exceptional circumstances, on the recommendation of the supervisor, by the Head of the Department/Centre concerned, subject to the following conditions:</p> <p>a) The leave beyond 30 days due leave will be</p>	<p>R.10 Leave, Attendance and Withdrawal R.10.1 Leave Rules A full-time PhD student, during his/her stay at the Institute, is entitled for 8 days casual and 15 days vacation leave and 15 days leave on medical grounds in an academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacation. The vacation and medical leave due can be carried over to the next year and both can be accumulated up to 60 days. An extension of leave beyond available leave up to additional 15 days will be granted only once during the programme by the Head of the Departments/Centres under exceptional conditions. Proper attendance record shall be maintained in the department. A PhD student is allowed to draw Assistantship/ Scholarship/ Fellowship during the sanctioned leave period. This is also applicable to:</p> <ul style="list-style-type: none"> • Maternity leave to a woman PhD student for a period not exceeding 125 180 days, once during the period of PhD programme; • Paternity leave for a male PhD student for period not exceeding 15 days once during the period of 	

<p>(Notification No. Acd./1814/UG-15 dated 20.11.2015)</p>		<p>without Assistantship/ Scholarship/ Fellowship.</p> <p>b) An extension of leave up to additional 30 15 days will be granted only once during the programme of the scholar.</p> <p>c) A proper leave account of each research student/candidate shall be maintained by the Department/ Centre concerned.</p> <p>d) Women scholars are entitled for maternity leave with full fellowship/assistantship as applicable, for a period not exceeding 180 days, once during the tenure of their award. The application for maternity leave should be supported by medical certificate.</p> <p>e) Male Scholars are entitled for 15 days paternity leave once during the tenure of their award. The application for paternity leave should be supported by medical certificate.</p> <p>f) Special leave may be granted with the permission of Dean of Academic Affairs to attend Seminars/Conferences in India /abroad and present paper. However, permission of Dean of Academic Affairs, is required to attend Seminars/ Conferences in abroad and present paper.</p> <p>g) Field trips, attending Seminars/Conferences/Workshops will be considered on duty.</p> <p>h) Research student/candidate supported by a Government/ semi-Government agencies may be governed by their own rules as applicable.</p>	<p>PhD programme.</p> <p>The application for maternity/paternity leave shall be made well in advance and should be supported by medical certificate.</p> <p>Special leave may be granted by Head of the Department/Centre for field trips, working in other research laboratory and to attend Seminars/ Conferences/ Workshops and present paper. The PhD student may continue to draw his/her assistantship/fellowship during these visits outside the institute and shall be considered on-duty if he/she is not availing any financial support from the host institute. Such period of absence for field trips/working in other research laboratories shall not be more than one semester.</p>
		<p>2. Attendance A research student/candidate irrespective of the</p>	<p>R.10.2 Attendance</p>

			<p>source of support including self financing, while pursuing course work, must have at least 75% attendance in each course in which he/she is registered. A research student falling short of 75% attendance in a course shall not be permitted to appear in the examination of that course and asked to leave the programme.</p> <p>A research student/candidate after having completed the course work must attend to his/her research work on all the working days and mark attendance except when he/she is away from the campus on duty/sanctioned leave. The requirement of 75% attendance will apply as above on daily attendance on monthly basis except in the cases where longer leave have been duly sanctioned within the leave entitlement of the research student/candidate.</p> <p>In case the attendance of a research student/candidate falls below 75% during a month, he/she will not be paid his assistantship/support, if applicable, for that month. Further, if his/her attendance again falls short of 75% in any subsequent months in the same semester his/her studentship/candidacy and support will be terminated.</p> <p>For the above purpose, if 75% works out to be a number which is not a whole number, the immediate lower whole number will be treated as the required 75% attendance.</p>	<p>During the course credit period, the minimum attendance requirement shall be as mandated by the institute regulations. A PhD student after having completed the coursework must attend to his/her research work on all the working days and mark attendance except when he/she is away from the campus on duty/sanctioned leave. The assistantship/fellowship shall be released on the recommendation of the supervisor in each month.</p>
WITHDRAWAL FROM SEMESTER/COURSES	R.15	1.	<p>A research student/candidate may be permitted by the Dean of Academic Affairs to withdraw from all the courses registered by her/him in the entire semester, on medical grounds supported by a medical certificate</p>	<p>R.10.3 Withdrawal from Semester</p> <p>A PhD student can seek withdrawal from a semester on medical grounds, supported by medical documents</p>

<p>(Item No. 60.23 Appendix 'L' dt 08.07.2015)</p>			<p>from the Institute Medical Officer. The medical certificate issued by a registered Medical Practitioner will also be acceptable in those cases where the research student/candidate has valid reasons for his/her absence from the Institute. Withdrawal may also be granted by the Dean of Academic Affairs provided he/she is convinced that the research student/candidate cannot pursue his/her studies for the reasons beyond his/her control.</p> <p>issued by institute hospital or issued by a certified medical practitioner and verified by institute chief medical officer. Permission is to be taken from Dean Academic Affairs. The medical certificate should be submitted (if not submitted earlier) within two days of his/her resuming duties at the Institute. Partial withdrawal from some of the courses registered in a semester is not admissible on medical grounds. The period of authorized absence in the semester should not be less than three weeks in a semester, for which withdrawal is to be granted.</p> <p>In case a student wishes to temporarily withdraw from his/her PhD Programme, he/she may do so only after candidacy with the permission of the Dean Academic Affairs on the recommendation of SRC. Temporary withdrawal may be granted for up to one year (two semesters) initially. Extension of the duration of withdrawal beyond the period of one year would normally not be encouraged, and could be granted by the Dean Academic Affairs, only under exceptional circumstances. The period of temporary withdrawal will not be counted, when counting the number of semesters of Ph.D. registration already completed by the student.</p>
		<p>2. Research Student/Candidate should present the medical certificate in support of his/her absence for health reasons within two days of his/her rejoining the Institute, if not produced already. Under no circumstances a request for semester withdrawal from a research student/candidate will be entertained after the major tests in courses have begun. Withdrawal will</p>	<p>R.10.4 Withdrawal from a Course</p> <p>A student may drop courses for which he/she may have registered if the academic load for the given semester is found to be too heavy. The last date for dropping a course by the student will be two weeks after the mid-</p>

			not be granted retrospectively.	semester examination. Such courses will appear in the transcripts and final grade card with 'W' grade.
		3.	The period of authorized absence in the semester should not be less than three weeks in a Semester, for which withdrawal is to be granted. Regularity in attending the classes / department and satisfactory performance in research/ the mid-term examinations, if any, held prior to the date of application for withdrawal are the factors which would be taken into account while recommending/ granting withdrawal.	
		4.	Any semester withdrawal will count towards the maximum limit of registration for six years for full time /seven years for part time research student/candidate as per clause R.2(b).	
CANCELLATION OF REGISTRATION <i>(Item No. 60.23 Appendix 'L' dt 08.07.2015)</i> <i>(Item No. 69.12 Agenda (Page No.25) Minutes (Page No.08) dt 28.07.2017)</i>	R.16	1.	<p>Registration of a Research student/candidate shall be cancelled in any one of the following eventualities, after due approval of Dean of Academic Affairs:</p> <ol style="list-style-type: none"> If he/she absents himself/herself for a continuous period of four weeks without prior intimation/sanction of leave and is duly recommended by the supervisor/ Chairman, DRC/CRC/HoD. If he/she resigns from the Ph.D. Programme and the resignation is recommended by the supervisor/ Chairman, DRC/CRC/HoD. If he/she fails to renew his/her registration in any semester following the provision contained in clause R.1.5. If his/ her academic and research progress is not as per requirement clauses R.7.4 and R.7.5. If all the prescribed courses including Audit course(s) are not successfully completed within the stipulated time frame of 45/20 18/24 months by Research students with Masters' Degree/ 	R.11 Cancellation of Registration <p>Registration of a PhD student shall be cancelled in any one of the following eventualities:</p> <ul style="list-style-type: none"> If any point of time any information required for admission and eligibility is found incorrect; If he/she is absent for a continuous period of four weeks without prior sanction of leave and is duly recommended by the supervisor/Chairperson, DRC/CRC/HoD; If he/she fails to renew his/her registration in any semester; If his/her academic and research progress performance is not as stipulated; If he/she fails to qualify for the candidacy of PhD within the stipulated duration; If he/she resigns from the PhD Programme and it is accepted by the Dean Academic Affairs;

			<p>Bachelors' Degree both for full time/part time student from initial registration following provisions of clause R.4.</p> <p>f) If he/she does not clear the comprehensive examination as stipulated in clauses R.5.2 and R.6.2.</p> <p>g) If he/she is found involved in an act of misconduct and/or indiscipline and termination has been recommended by a competent authority.</p>	<p>If he/she is found involved in an act of misconduct and/or indiscipline and termination has been recommended by the competent authority.</p> <p>R.12 Exit from Ph.D. Programme</p> <p>If a PhD student in may exit from the programme with an M.S. (Research) degree provided:</p> <ul style="list-style-type: none"> • The PhD student has qualified for the candidacy; • A request to this effect is made at least six months before the exit but not before the student has completed two-and-half years (excluding the period of sanctioned leave, if any) in the programme; <p>The request is approved by the Senate on the recommendations of DRC and IRC.</p>
<p>TO TAKE UP JOBS/ASSIGNMENTS (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p>	R.17		<p>The Full time research student/candidate cannot take up any regular job/assignment during Ph.D. programme.</p> <p>If he/she takes up a job / assignment, his/her status will be converted from Full-time to Part-time student in accordance with clause A.2.3. Conversion of status from Full-time to Part-time is admissible only after the candidacy.</p>	
<p>GENERAL (Item No. 60.23 Appendix 'L' dt 08.07.2015)</p>	R.18	1.	<p>Notwithstanding anything contained in these Ordinances & Regulations, all categories of the research students/candidates shall be governed by the regulations, guidelines and procedures framed by the Senate in this regard, and in force from time to time.</p>	

		2.	<p>Unfair means and Plagiarism</p> <p>a) In case a research student/candidate is found adopting or suspected of adopting unfair means before, during and after the examination or lifting of some other's work(s) and inserting it in his/her project, seminar and dissertation, etc. without proper acknowledgment, credit and reference or plagiarizing the dissertation/project report etc., such penal action shall be taken by the Institute as may be necessary to uphold the sanctity and integrity of the examination system and the credibility of the Institute.</p> <p>b) All such cases may be taken suo-moto cognizance of by the Institute Standing Committee (ISC) appointed by the Senate for this purpose. Such cases may also be reported by examiners/invigilators/ supervisor(s)/ Chairman, DRC/CRC or any person to Dean of Academic Affairs and or the Institute Standing Committee for consideration. After giving an opportunity to the concerned research student(s) /candidate(s) to explain the conduct/defend against the charge, the Chairman, Senate on the recommendation of Institute Standing Committee shall take action to impose on the concerned research student(s)/candidate(s) appropriate penalty including termination of registration or award of F Grade in the concerned course(s) etc.</p>	
INTERPRETATION (Item No. 60.23 Appendix 'L')	R.19	1.	Any doubt or dispute about the interpretation of these Ordinances and Regulations shall be referred to the Chairman, Senate whose decisions shall be final.	

dt 08.07.2015)		2.	<p>Eligibility for admission to Ph.D. programmes in different disciplines is summarized in Annexure-I. This may be reviewed from time to time by the concerned department/centre and approved by the Senate.</p> <p>Note: The recommendations of SRC in respect of a research student are to be made on prescribed proforma available in the office of concerned department / centre as well as Institute website.</p>	
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Additional Suggestions of Manish Shrikhande Committee which are not met in the existing Ph.D. Ordinances & Regulations

Suggestions from Faculty Colleagues

- Admission Process

- Prof. Prateek Jha: "JRFs under projects who register for PhD are eligible for 2 year institute assistantship after completion of the project. Is GATE qualification a mandatory criteria for availing that assistantship for engineering students not from CFTIs." -- Eligibility for PhD admission is well defined and is independent of the source of financial support. The institute assistantship will be available if the candidate has been admitted to PhD programme.

- Prof. R.S. Mulik: "The requirement of 5 years of experience in case of sponsored candidates is too high. It is really difficult to cope with the course work after 5 years of gap. Request to cut it down to 2 years." The committee is in favour of retaining 5 years of experience for bringing in adequate industrial experience to research programme. The IRC may deliberate further.

- Supervisor Allocation

Prof. Vipul Rastogi suggested that the allocation of supervisor at the time of admission is working well for the Physics department and should be continued.

Comparative Chart for Part-I of PhD Manual Suggested by Prof. Manish Shrikhande Committee

Part-I: ADMISSION PROCESS

Clause	Existing	Proposed
Preamble	<p>1. Ph.D. PROGRAMMES</p> <p>Keeping in view the long tradition of academic excellence, the following institutional goals have been laid for doctoral research:</p> <ul style="list-style-type: none"> * To develop deep and broad understanding of fundamentals and state of the art of knowledge in the chosen field through courses and self-study, * To develop synergy between creativity, innovation and the frontiers of knowledge in the chosen field of study, * To develop ability and skills to carry out independent research and development to face the challenges posed to mankind on specific problems, and * To develop abilities to identify new possibilities in the given Indian social context and to undertake research and development through one's own initiatives. <p>The Degree of Doctor of philosophy is granted for research work in areas recognised by the Academic Departments of the Institute. The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts, or development of equipment making a distinct advancement in instrument technology. It shall evince the candidate's capacity for critical examination and sound judgement and shall represent original contribution to the existing knowledge. The Institute is also recognised as one of the centres in the country for Ph.D. programmes under QIP.</p> <p>Facilities for enrolling for the Ph.D. programme as a part time candidate are also available.</p>	<p>A.0 Preamble</p> <p>A.1 Academic Session</p> <p>The academic session of the Institute is divided into two semesters. The first semester will normally commence in the month of July (Autumn semester), and the second in the month of January (Spring semester) every year.</p> <p>PhD students with institute assistantships are admitted twice a year in Autumn and Spring semesters. In addition, departments/centres may process applications throughout the year for admissions to Ph.D. programmes for candidates joining through different funding schemes.</p>

	<p>2. ADMISSION CATEGORIES</p> <p>The applicant for admission to the Ph.D. programme shall be classified under any one of the following categories which will be decided and recommended by DRC/CRC.</p> <p>(I) Full-time Research student/Candidate</p> <ol style="list-style-type: none"> Research student/Candidate getting Institute assistantship. Research student/Candidate including foreign nationals getting financial support from Govt. / Semi Govt. agencies (QIP, CSIR, UGC, NET, DAE, DST, DBT, NBHM, ICCR, ICAR, ICMR, GPAT, NDF, INSPIRE etc.) Research student/Candidate including foreign nationals supported by a sponsoring organization, the applicant (Sponsored Research Student/ Candidate) having TWO years experience out of which at least ONE year experience with the sponsoring agency at the time of registration for Ph.D Programme. Research student / Candidate working regularly full-time in an R&D project in the institute. The project must have tenure of at least next 1½ years at the time of admission. His/her Ph.D. topic shall confirm to the project as certified by the SRC. <p>II) Part-time Research Student/ Candidate:</p> <ol style="list-style-type: none"> Research student/Candidate working as a regular employee in the Institute Research student/Candidate working in other organizations / institutes, approved by IIT Roorkee as Research Centre or having MoU for research purposes. 	<p>A.2 Admission Categories</p> <p>A.2.1 Full-time Research student/ Candidate</p> <ol style="list-style-type: none"> Prime Minister's Research Fellowship (PMRF); Institute Assistantship (IA); Externally Funded Schemes (EFS); Sponsored Research Scholars (SRS) with minimum fiveTWO years experience in a Government/Semi-Government organization/Public Sector Undertaking; AICTE recognized educational institution or an organization with annual turnover of more than Rs. FiveTwenty Crores. This category refers to persons who are released on study leave for a period of not less than threetwo years for pursuing Ph.D. programme; Foreign Research Scholars (FRS) admitted as per Institute and Government policies; Project Research Scholar (PRS) working full time in a sponsored project at IIT Roorkee and fulfilling the minimum eligibility criteria as laid out in the next section. The Ph.D. topic shall conform to the project as certified by the SRC. The project must have remaining tenure of at least next one and a half years 12 months at the time of registration admission. After completion of the project duration, the candidate will be supported by the Institute Assistantship (over and above the sanctioned Assistantships). <p>A.2.2 Part-time Research Scholars (PTS):</p> <ol style="list-style-type: none"> Regular employee in the Institute with at least 5-2 years experience; Candidate with at least five years experience and working as regular employee in other organizations/institutes, approved by IIT Roorkee as Research Centre or having MoU for research purposes as regular employee. Same as SRS above
	<p>3. ADMISSION ELIGIBILITY</p> <ol style="list-style-type: none"> An applicant belonging to the above admission categories 	<p>A.3 Eligibility for Admission and Reservation of Seats</p> <p>The eligibility conditions given below are the absolute minimum.</p>

	<p>should possess the following qualifications in appropriate areas to be eligible to apply for admission for the Ph.D. programme of the Institute.</p> <p>a) Masters degree or equivalent in respective discipline with a minimum Cumulative Grade Point Average (CGPA) of 6.00 on a 10 point scale or equivalent as determined by the Institute wherever letter grades are awarded; or 60% marks in aggregate (of all the years/semesters) where marks are awarded, for the GENERAL (UR) category and qualified national level graduate entrance test: GATE/UGC-NET/CSIR-NET or equivalent or holding a national level fellowship. The condition for national level graduate admission test is not applicable to sponsored full-time and part-time research candidates.</p> <p>Candidates with postgraduate degree in professional courses can be admitted with institute assistantship. The condition of GATE/NET qualification is not mandatory.</p> <p style="text-align: center;">OR</p> <p>b) B.Tech. / B.Arch. degree or equivalent in respective discipline from CFTIs with excellent academic record (with a minimum CGPA of 7.00 on a 10 point scale or 70% marks) with GATE.</p> <p>Graduates from the IITs getting a CGPA score of 8.00 or above (on scale of 10) would be entitled to the assistantship without having to appear in GATE.</p> <p style="text-align: center;">OR</p> <p>The candidates pursuing master's programs in Engineering or Architecture from IIT Roorkee having CGPA of at least 8.50 on a 10 point scale (after first year/ completing all courses) shall have a choice of internal lateral entry in to Ph.D. programme after</p>	<p>Departments/Centres may prescribe any requirements over and above these. Reservation is applicable as per extant policies of the Government of India and prescribed by the Board of Governors. The number of admissions in a semester/year shall be as decided by the Senate.</p> <p>A.3.1 Minimum Grade/Score in Qualifying Degree</p> <ol style="list-style-type: none"> 1. Master's degree or equivalent in respective discipline with a minimum Cumulative Grade Point Average (CGPA) of 6.0 on a 10 point scale, or 60% marks in aggregate (of all the years/semesters) where marks are awarded, for the GENERAL (UR) category. The candidates with master's degree in science/arts/commerce must either have a valid GATE/CEED/CAT/GMAT/CLAT score or must have qualified for/in JRF/NET. For admission to the Ph.D. programmes in sciences and HSS, the candidates from any background either must have a valid GATE score or must have qualified JRF (NET in the case of Ph.D. programmes in HSS). The requirement of having qualified national level test/fellowship is not mandatory for post graduates with professional degree or sponsored full-time and part-time candidates. 2. B.Tech./B.Arch. degree or equivalent in respective disciplinewith excellent academic record (with a minimum CGPA of 7.50 on a 10 point scale or 75% marks in aggregate of all the years/semesters) with valid GATE score. From graduates from Centrally Funded Technical Institutes (CFTIs), the minimum CGPA requirement is 7.0 on 10 point scale or 70% marks in aggregate of all the years/semesters with a valid GATE score. The condition of national level test/fellowship is not applicable to sponsored full-time and part-time candidates. 3. Graduates from IITs with CGPA more than 8.0 on a 10 point scale are exempted from the requirement of a GATE score. 4. The candidates pursuing Master's programs in Engineering or Architecture/MURP from IIT Roorkee having CGPA of at least 8.50 on a 10 point scale (after first year/ completing all courses)
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<p>completing all requirements of the first two semesters of first year of the Master's programme.</p> <p>2. The admission eligibility requirements may be relaxed to 5.5 on a 10 point scale or equivalent, or to 55% marks to the following categories:</p> <p>a. SC/ST candidates with Master's degree or equivalent degree.</p> <p>b. Any category of PD (Persons with different abilities) candidate holding Master's degree or equivalent degree.</p> <p>Note: Candidates belonging to OBC category must submit a copy of category certificate as per GOI, the format of the same is also available on the Institute website, OBC Non-creamy layer certificate should have been issued after 31.03.2017 by a competent authority.</p> <p>1. Eligibility for Part-time Ph.D.</p> <p>a) The applicant possesses the minimum entry qualifications for the degree as given;</p> <p>b) The applicant proves that his official duties permit him to devote sufficient time to research;</p> <p>c) He / She will be required to reside at the Institute for a period till he/she is admitted for candidacy. (This condition of minimum residency period will be automatically waived for candidates who are working in Roorkee or in Organizations / Institutions located within a distance of 100 km from the Institute).</p> <p>d) The facility of part time registration will also be available to all employees of the IIT Roorkee or candidates working in organizations having MoU with IITR or organizations approved by IIT Roorkee as Research Centres. Such applicants are exempted from the requirement of having GATE/NET/GPAT.</p>	<p>shall have a choice of internal lateral entry to PhD programme after completing all requirements of the first two semesters of first year of the Master's programme.</p> <p>5. Indian nationals with Master's degree in Engineering/Science from overseas Universities (UG 4 years + PG 2 years or more / Integrated Master's (5 years)), having cleared GATE/NET or equivalent test, if the Master's degree is not in a professional course.</p> <p>The admission eligibility requirements may be relaxed to 5.50 on a 10 point scale or equivalent or to 55% marks in aggregate (of all the years/semesters) for SC/ST or PwD (Persons with Different abilities) candidates with Master's degree.</p> <p>The candidates working in Institute/University awarding Ph.D degree itself are not eligible for admission as part time or full time candidate, except for Quality Improvement Programme (QIP) candidates.</p> <p>A.3.2 Additional Criteria for Project Fellows:</p> <p>The candidate seeking admission to PhD programme as project fellow (JRF/SRF) either as full-time or part-time research scholar, shall be allowed to register for Ph.D immediately after joining the project position if the candidate is selected through the specified selection procedure. The candidate shall register with the Principal Investigator (PI) / Co-PI as supervisor. If the project fellow wishes to switch over to the institute assistance, he/she will have to appear for regular PhD selection conditional on securing a 'No-Objection Certificate' from the PI. These candidates are also eligible for institute assistantship for a maximum period of two years once their project is completed. The candidate has to apply for the institute assistantship through SRC.</p> <p>A.3.3 Criteria for Candidates with Fellowships through rolling advertisement (UGC/CSIR/DBT/DST/ICMR, etc.):</p> <p>The result of fellowship should have been declared after the deadline of advertisement of PhD admissions with institute assistantships in</p>
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<p>e) The applicants must have been in continuous service with the sponsoring organization for at least two years at the time of registration for admission.</p> <p>f) The candidates working in Institute/ University awarding Ph.D degree itself are not eligible for admission as part-time or full-time candidate, if facilities are not available except QIP candidates.</p> <p>2. Employee seeking admission to the Ph.D. programme with minimum of two years service in an organization or confirmed regular employee shall submit 'No Objection Certificate' from the employer to the effect that the duties allotted by the employer will allow the required time for this pursuit.</p> <p>3. The candidate seeking admission to Ph.D. programme as project fellow (JRF/SRF) either as full-time or part-time research scholar, shall be allowed to register for Ph.D. in the beginning of the next semester, if the candidate is selected in project as project fellow through proper selection, i.e, proper advertisement of project fellowship and selection by the committee constituted as per Institute rules. The candidate shall register with the PI as supervisor.</p> <p>If the candidate is not selected in project through proper advertisement or the candidate wants to switch over to Institute assistance, he/she has to appear for Ph.D selection along with other candidates provided he/she has 'No-Objection Certificate' from the PI.</p> <p>The project fellows shall be allowed to register for Ph.D. only if the remaining period of the project is at least 1½ years at the time of admission. These candidates are also eligible for Institute assistantship for a maximum period of TWO years once their project is completed provided the essential qualifications for Institute assistantships are met.</p>	<p>Autumn/Spring semester. These candidates can apply only once through the rolling advertisement. If the candidate wishes to apply more than once he/she may apply through the regular advertisement.</p> <p>A.3.4 Criteria for Prime Minister's Research Fellowship: PMRF selection will be done as per the guidelines given by MHRD. More details are available at https://pmrf.in</p> <p>The applicants for the PMRF should:</p> <ol style="list-style-type: none"> 1. have completed or be pursuing the final year of four (or five) year undergraduate or five year integrated M.Tech or five year integrated M.Sc. or five year undergraduate postgraduate dual degree programs in Science and Technology streams from IISc/IITs/NITs/IISERs and centrally funded IITs; 2. have secured at least CGPA/CPI of 8.0 (in scale of 10.0). For applicants in five year integrated or dual degree programs if separate CGPAs/CPIs are awarded for UG and PG parts of the program then the CGPA/CPI of UG part (first four year) will be considered; 3. have completed the required academic qualification in the last five years. <p>Merely satisfying the eligibility requirement does not guarantee admission. Final selection for admission of applicants will be done following a rigorous selection process. Details are available at https://pmrf.in</p> <p>A.3.5 Additional Criteria for Foreign Nationals: Foreign candidates seeking admission with institute assistantship should fulfil the following:</p> <ol style="list-style-type: none"> Candidates holding Master's degree in Engineering/Science (UG 4 years + PG 2 years or more / Integrated Master's (5 years)) from an Indian university/institute should have cleared GATE/NET/CAT or equivalent test if the Master's degree is not in a professional course. Candidates (other than SAARC countries) holding Master's
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	<p>The candidate has to apply for Institute assistantship through SRC.</p>	<p>degree in Engineering/Science (UG 4 years + PG 2 years or more /Integrated Master's (5 years)) from an overseas university/institute with English proficiency is desirable should have a valid GRE/GMAT score.</p> <p>The applications of foreign nationals, who are sponsored by the Indian Council of Cultural Relations (ICCR) will be scrutinized by the Departments/Centres concerned to assess their suitability for admission to the programme. The Department/Centre's recommendation will be sent to the academic office through the Chairman, DRC. Interviews if required can be conducted through video conferencing.</p> <p>The candidates from SAARC countries shall be treated at par with Indian nationals (general category).</p> <p>All international applicants whose native language is not English must submit an official Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) score.</p> <p>A.3.6 Additional Criteria for Candidates with Degree in Medicine:</p> <ol style="list-style-type: none"> 1. Candidates with MBBS/MDS degree from Indian university/institute should have a minimum CGPA of 6.0 on 10 point scale, or 60% in the qualifying degree and are exempted from the GATE/ CSIR/ JRF/NET requirement. 2. Candidates with MS/MD degree from Indian university/ institute are exempted from a CGPA requirement and also exempted from the GATE/ CSIR/ JRF/NET requirement. 3. Candidates with MBBS degree from an overseas university/institute should have a minimum CGPA of 6.0 on 10 point scale, or 60% in the qualifying degree and should have qualified the Foreign Medical Graduate Examination as required by National Board of Examination/ Medical Council of India.
	<p>R.1 Admission to PhD Programme</p>	<p>A.4 Admission Procedure</p>

<p>Regular Admission: Admission to Ph.D. Programmes shall be made on the basis of regular advertisement for the Spring Semester and Autumn Semester.</p> <p>Admission on Rolling Basis: Admission to Ph.D. Programmes shall be made on rolling basis.</p> <p>Admission under Prime Minister Fellowship Programme (PMRF): Admission to Ph.D. shall also be made under PMRF Scheme.</p> <p>Note: Policy / selection guidelines, the eligibility criteria and other terms & conditions for admission shall be defined (in the information brochure) in line with policy / guidelines laid down by the Council / Government of India and decision of the Senate.</p>	<p>A.4.1 Procedure Admission to the Ph.D. programmes will be based on written tests and/or interviews of the candidates shortlisted by the DRC/CRC of the department/centre concerned. The criteria for shortlisting of candidates will be decided by the concerned department/centre subject to the minimum specified above.</p> <p>The academic section will issue the admission letters to the candidates who will be required to accept the offer of admission by depositing the prescribed fee before the specified date. The selected candidates who have completed all requirements of qualifying degree for admission to PhD programme before the date of registration but are unable to produce the certificate in proof of having passed and secured the minimum specified qualifying marks, may be considered for provisional admission. However, if admitted provisionally, they will be required to produce the evidence of their having passed the qualifying degree examination with minimum specified marks by the last date for document submission as specified in the academic calendar (usually about 8 weeks from the date of registration), failing which the admission and registration may be cancelled.</p> <p>In case a candidate does not accept the offer by paying the prescribed fee by the specified date, the offer of admission shall stand withdrawn. The seat may be offered to the candidate in the waiting list, if any, in the order of merit. The selected candidates who have accepted the offer but are unable to join the programme by the specified date may request the Dean Academic Affairs for extension.</p> <p>The thesis supervisor shall be finalized by the DRC on the basis of stated preferences of a candidate.</p> <p>A.4.2 Admission of PhD candidates under Quality Improvement Programme These admissions shall be governed by QIP norms.</p>
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		<p>A.4.3 Admission of Indian Nationals Residing Abroad (INRA) INRA candidates are those with Overseas Citizen of India (OCI)/Person of Indian Origin (PIO)/ Non-resident Indian (NRI) status. Their applications may be processed by the Departments/Centres as and when they are received. The minimum eligibility requirements for admission shall be same as that for Indian nationals (general category).</p> <p>A.4.4 Admission as Part-time Candidate The part-time candidate will be required to reside at the Institute for a period till he/she is admitted for candidacy. This condition of minimum residency period will be automatically waived for candidates who are working in Roorkee or their place of work is located within a distance of 100 km from the Institute). These candidates shall submit 'No Objection Certificate' from the employer to the effect that the duties allotted by the employer will allow the required time for this pursuit.</p>
		<p>A.5 Selection for PhD Programme The procedure for shortlisting and selection of candidates to PhD programme shall be decided by the respective department/centre. The list of selected candidates, in the order of merit (with provision for waitlisted candidates), shall be sent to the Dean Academic Affairs by the department/centre within two working days of the date of interview. The list of selected candidates shall be notified by the office of Dean Academic Affairs.</p>
	<p>R.2.2 Appointment of Supervisor During the admission process, faculty members who do not have Ph.D scholar under MHRD fellowship working under their supervision, shall be given the highest priority to facilitate reasonable uniform distribution of MHRD scholars amongst the faculty members of Departments/Centres.</p> <p>The candidates are required to give their choice for supervisors based on his/her area of interest and supervisor is allocated to him/her at the</p>	<p>A.6 Thesis Supervisor The list of selected candidates shall be uploaded on the institute web page by the office of Dean Academic Affairs within a day of receiving the information from departments/centres. The selected candidates shall fill their preferences for thesis supervisor on the link provided on the web page and confirm their acceptance of the offer of admission to PhD programme by depositing the requisite fees within the stipulated period, failing which the offer of admission will stand withdrawn and the candidate on the waiting list shall be offered the admission to PhD programme.</p>

	<p>time of recommending the candidates for admission. The candidates shall be informed about the supervisor allocated in the admission letter. The candidates shall have to work with the supervisor allocated.</p> <p>Only one MHRD scholar shall be taken by a faculty in a semester, in general. In case, if the faculty member wants to take another MHRD scholar in a semester, no-objection from other faculty members of the concerned academic group is required.</p>	
	<p>R.12 Financial Assistance (Institutional Assistantship)</p> <p>a) Those students who are admitted on full-time basis are considered for the award of Institutional MHRD Assistantship of the amount as decided by the Government of India from time to time, under specified terms and conditions.</p> <p>b) The students getting Institute MHRD Assistantship will provide 8-10 hours of assistance per week in teaching, laboratory development, and research.</p> <p>c) The total number of MHRD assistantships in a department will be as decided by the institute from time to time. The maximum duration for which assistantship can be awarded to any Ph.D. research student is 4 years for MHRD and UGC/CSIR fellows or till the end of the semester in which the thesis is submitted, whichever is earlier. Continuation of the fellowship is contingent on satisfactory academic and research performance and satisfactory performance in the discharge of responsibilities for assistance assigned under the scheme. IITR Assistantship to research scholars may be extended up to the viva-voce Examination on the recommendation of supervisor. This is subject to their registration in those semester(s). However, in any case, the assistantship cannot be given beyond five years as per the guidelines of MHRD.</p>	<p>A.5 Financial Assistance</p> <p>The Institute may provide financial assistance in the form of teaching or research assistantships (referred to as Institute Assistantship). Assistantships are awarded on a semester to semester basis for a period of up to five years for PhD students. The stipend for the assistantship is paid at the approved rates as decided by the Government of India from time to time.</p> <p>A student is expected to devote up to eight to ten hours per week towards job(s) assigned to him/her. The renewal of assistantship is contingent on the student's satisfactory performance in the academic programme and in the discharge of assistantship duties.</p> <p>Project fellows may be offered institute assistantship after the expiry of project funding for a maximum cumulative period of five years (project funding + institute assistantship) in PhD programme. These assistantships will be over and above any limit/quota of institute assistantships for Departments/Centres.</p> <p>Financial assistance will not be available from the institute to candidates who are recipients of the fellowship awards from UGC/CSIR/DST/ICMR/DBT, etc.</p> <p>Tuition fee waivers may be available as per the Government of India guidelines.</p>

	<p>MHRD or UGC/CSIR fellowship can be given to the students in the 5th year provided the SRC or the three member assessment committee respectively strongly recommends with a justification for fellowship after the candidate delivers a seminar before the committee, to show progress. The committee has to specify the date beyond 4th year upto which fellowship can be given.</p> <p>It is to be noted that admission to the Programmes and award of assistantship are not linked. Admission to any programme does not guarantee the award of fellowship/ assistantship. Those who are not awarded assistantship can continue with the programmes as a self financing student.</p> <p>R.13 Tuition Fee Waiver to PhD Students Tuition Fee Waivers is given to research students/ candidates following the policy of the Government of India, Ministry of Human Resource Department.</p>	
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Item No. 74.13: To consider the following requests/appeals from students:

- (i) Extension in time limit of students who have already availed one year extension beyond permissible limit.**
- (ii) Continuation of programme in spite of not fulfilling the minimum earned credit requirement.**

The IAPC in its meeting held on 25th July 2018 considered the said requests and recommended the following:

- (i) The request for extension in time limit of the student listed in **Appendix 'A'** has not been recommended.
- (ii) The requests for continuation of programme of the students listed in **Appendix 'B'** have not been recommended.

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

Appendix 'A'
Item No. Senate/74.13

Request for extension of time after already availing one year

S. No.	Enrol. No	Name	Branch	CGPA	SGPA	TECr	Total remaining credits to award of degree	Remark
1	11115113	VEMIREDDY SAI SUDHEEP	B.Tech. (EE)	5.136	0	162	32	ALREADY AVAIL ONE YEAR EXTENTION AFTER MAX. DURATION "No improvement after extension"

Date : 18 July 2018

To
The Dean of Academic Affairs
Indian Institute of Technology, Roorkee,
Haridwar - 247667

Through :- DAPC/HOD of Electrical Engg. Dept and DOSW.
Subject :- Regarding approval for registration in Autumn
Semester 2018-19.

Respected Sir,

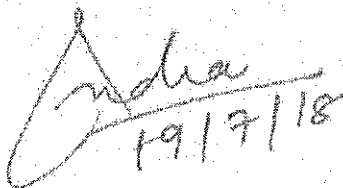
I am a student of BTECH Electrical Engg dept of 2011 batch.
I completed 162 credits with COIPA 5.1 till now. I need to
register in this Academic year to complete my degree with
190 credits as per Rules & Regulations 2011.


Due to many Personal problems & my mental Health, I couldn't
complete my degree till now. I have learned from my past
mistakes and I am willing to work hard to complete my
degree. Please consider this as my last & final chance.
I need 28 more credits to complete my degree. I included
my remaining Subjects in next page [P.T.O.]

So, please kindly approve my request and allow me to
register in this current Semester Autumn 2018-19. I will be
very grateful to this kindness for the rest of my life.

Thanking You,

Forwarded.


19/7/18

F

19/7/18
Head of Dept, E.E. Dept.
IIT Roorkee

Yours Sincerely,
V. Sai Sudheep,
11115113,
BTECH-EE

Ph No :- 7706123469.

The Subjects Still left to complete :-

EEN - 301	Power System Analysis & Control	-	4
EEN - 303	Power Electronics	-	4
EEN - 304	Protection & Switch Gear	-	4
EEN - 400B	BTECH Major Project	-	8
& 2 Departmental Electives		-	8

28 credits



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 11115113
PROGRAMME: BACHELOR OF TECHNOLOGY (ELECTRICAL)

NAME: VEMIREDDY SAI SUDHEEP

SESSION 2011-12		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
CE-101	ENGINEERING GRAPHICS	C	4.00		
CE-102	ENVIRONMENTAL STUDIES	D	2.00		
CY-101	CHEMISTRY	C+	5.00		
EC-102	FUNDAMENTALS OF ELECTRONICS	D	4.00		
HS-102	BEHAVIORAL SCIENCE	B+	2.00		
MA-101	MATHEMATICS-I	C+	4.00		
MI-101	THERMODYNAMICS	C	3.00		
EARNED CREDITS	24	TOTAL EARNED CREDITS	24	SGPA	5.375
REG. CREDITS	24			CGPA	5.375

SESSION 2011-12		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
BT-101	FUNDAMENTALS OF BIOTECHNOLOGY	C	2.00		
EC-101A	COMPUTER SYSTEMS & PROGRAMMING	C	4.00		
EE-101	ELECTRICAL SCIENCE	C	4.00		
HS-101	TECHNICAL COMMUNICATION	B+	2.00		
MA-102	MATHEMATICS-II	D	4.00		
MI-102	MANUFACTURING TECHNIQUES	F	3.00		
PR-501	N.C.C.	B	2.00		
DISP	DISCIPLINE	A+	2.00		
EARNED CREDITS	20	TOTAL EARNED CREDITS	44	SGPA	5.043
REG. CREDITS	23			CGPA	5.568

SESSION 2011-12		SEMESTER Summer Term			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
MI-102	MANUFACTURING TECHNIQUES	B	3.00		
PH-101	PHYSICS-I	C+	5.00		
EARNED CREDITS	8	TOTAL EARNED CREDITS	52	SGPA	6.375
REG. CREDITS	8			CGPA	5.692

SESSION 2012-13		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
BM-201	MANAGEMENT CONCEPTS AND PRACTICES	F	3.00		
CH-201	ENERGY RESOURCES AND CONSERVATION	C+	2.00		
EE-201	NETWORK THEORY	D	4.00		
EE-203	ELECTRICAL MEASUREMENTS AND MEASURING INSTRUMENTS	C+	4.00		
IES-04	PLANETARY GEOSCIENCES	D	3.00		
MT-201A	MATERIAL SCIENCE	D	4.00		
PH-201	PHYSICS-II	D	3.00		
EARNED CREDITS	20	TOTAL EARNED CREDITS	72	SGPA	4.000
REG. CREDITS	23			CGPA	5.389

SESSION 2012-13		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
CE-201	COMPUTER AIDED GRAPHICS	F	2.00		
EE-202	ELECTRICAL MACHINES -I	B	5.00		
EE-204	ELECTROMAGNETIC FIELD THEORY	D	3.00		



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NAME: VEMIREDDY SAI SUDHEEP

PROGRAMME: BACHELOR OF TECHNOLOGY (ELECTRICAL)

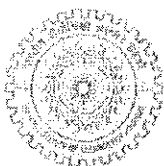
EE-206	POWER ELECTRONICS	F	4.00
EE-208	DIGITAL ELECTRONIC CIRCUITS AND SYSTEMS	D	4.00
HS-201	ECONOMICS	C	3.00
IES-01	FRACTALS AND APPLICATION	D	3.00
PR-202	PHOTOGRAPHY	C+	1.00
DISP	DISCIPLINE	A+	2.00
EARNED CREDITS	21	TOTAL EARNED CREDITS	93
REG. CREDITS	27	SGPA	4.296
		CGPA	5.419

SESSION 2013-14		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
BM-201	MANAGEMENT CONCEPTS AND PRACTICES	F	3.00		
CE-201	COMPUTER AIDED GRAPHICS	F	2.00		
EE-301	POWER SYSTEM ENGINEERING	F	4.00		
EE-303	ELECTRICAL MACHINES-II	F	5.00		
EE-305	SYSTEM ENGINEERING	F	3.00		
EE-307	MICROPROCESSORS & PERIPHERAL DEVICES	D	5.00		
EE-309	APPLIED INSTRUMENTATION	C+	3.00		
IBM-04	STRATEGIC HUMAN RESOURCE MANAGEMENT	C	3.00		
EARNED CREDITS	11	TOTAL EARNED CREDITS	104	SGPA	1.893
REG. CREDITS	28			CGPA	5.356

SESSION 2013-14		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
BM-201	MANAGEMENT CONCEPTS AND PRACTICES	C	3.00		
CE-201	COMPUTER AIDED GRAPHICS	B	2.00		
EE-206	POWER ELECTRONICS	F	4.00		
EE-304	ELECTRIC DRIVES	F	4.00		
EE-306	CONTROL SYSTEMS	F	5.00		
EE-310	COMMUNICATION SKILLS	F	2.00		
IBT-02	MACROMOLECULAR CRYSTALLOGRAPHY	C	4.00		
PR-202	PHOTOGRAPHY	B	1.00		
DISP	DISCIPLINE	A+	2.00		
EARNED CREDITS	12	TOTAL EARNED CREDITS	116	SGPA	2.593
REG. CREDITS	27			CGPA	5.405

SESSION 2014-15		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
EE-301	POWER SYSTEM ENGINEERING	FS	4.00		
EE-303	ELECTRICAL MACHINES-II	D	5.00		
EE-305	SYSTEM ENGINEERING	D	3.00		
EE-403	TRAINING & SEMINAR	D	2.00		
EE-405	MINOR PROJECT	B	2.00		
IBT-03	NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY	F	4.00		
EARNED CREDITS	12	TOTAL EARNED CREDITS	128	SGPA	2.700
REG. CREDITS	20			CGPA	5.320

SESSION 2014-15		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
EE-302	POWER SYSTEM ANALYSIS & CONTROL	F	4.00		
EE-304	ELECTRIC DRIVES	F	4.00		
EE-306	CONTROL SYSTEMS	D	5.00		
EE-308	ELECTRONIC INSTRUMENTATION	F	3.00		



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 11115113

NAME: VEMIREDDY SAI SUDHEEP

PROGRAMME: BACHELOR OF TECHNOLOGY (ELECTRICAL)

EE-510	COMMUNICATION SKILLS	F	2.00
EEN-206	POWER TRANSMISSION AND DISTRIBUTION	D	4.00
THS-06	INDIAN NOVEL IN ENGLISH	B	3.00
PR-207	STAR GAZING	C+	1.00
EARNED CREDITS	13	TOTAL EARNED CREDITS	141
REG. CREDITS	26	SGPA	2.423
		CGPA	5.277

SESSION 2015-16		SEMESTER Autumn	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT
EE-401	PROTECTION AND SWITCHGEAR	F	4.00
EEN-301	POWER SYSTEM ANALYSIS & CONTROL	F	4.00
EEN-303	POWER ELECTRONICS	F	4.00
EEN-568	DATA STRUCTURES	FS	4.00
EEN-522	BIOMEDICAL INSTRUMENTATION	F	4.00
EARNED CREDITS	0	TOTAL EARNED CREDITS	141
REG. CREDITS	20	SGPA	0.000
		CGPA	5.277

SESSION 2015-16		SEMESTER Spring	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT
EE-402	MAJOR PROJECT	F	8.00
EEN-302	ELECTRIC DRIVES	D	4.00
EEN-304	PROTECTION & SWITCHGEAR	F	4.00
EEN-568	DIGITAL PROTECTION OF POWER SYSTEMS	F	4.00
EEN-671	POWER SYSTEM DEREGULATION	F	4.00
IEQ-03	UNDERSTANDING EARTHQUAKE HAZARD AND DISASTER	F	4.00
EARNED CREDITS	4	TOTAL EARNED CREDITS	145
REG. CREDITS	28	SGPA	0.571
		CGPA	5.241

SESSION 2016-17		SEMESTER Autumn	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT
EEN-391	TECHNICAL COMMUNICATION	D	2.00
EEN-522	BIOMEDICAL INSTRUMENTATION	C	4.00
EEN-562	DISTRIBUTION SYSTEM ANALYSIS AND OPERATION	D	4.00
IEQ-05	EARTHQUAKE GEOLOGY & GEOINFORMATICS	FS	4.00
EARNED CREDITS	10	TOTAL EARNED CREDITS	155
REG. CREDITS	14	SGPA	3.143
		CGPA	5.187

SESSION 2016-17		SEMESTER Spring	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT
EEN-208	APPLIED INSTRUMENTATION	D	4.00
EEN-671	POWER SYSTEM DEREGULATION	F	4.00
IEQ-303	EARTHQUAKE GEOLOGY & GEOINFORMATICS	D	3.00
EARNED CREDITS	7	TOTAL EARNED CREDITS	162
REG. CREDITS	11	SGPA	2.545
		CGPA	5.136

SESSION 2017-18		SEMESTER Autumn	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT
EEN-301	POWER SYSTEM ANALYSIS & CONTROL	F	4.00
EEN-303	POWER ELECTRONICS	F	4.00
EEN-560	COMPUTER AIDED POWER SYSTEM ANALYSIS	F	4.00
EEN-683	INTRODUCTION TO ROBOTICS	F	4.00



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 11115113

NAME: VEMIREDDY SAI SUDHEEP

PROGRAMME: BACHELOR OF TECHNOLOGY (ELECTRICAL)

EARNED CREDITS	0	TOTAL EARNED CREDITS	162	SGPA	0.000
REG. CREDITS	16			CGPA	5.136

SESSION 2017-18	SEMESTER Spring				
SUBJECT CODE	SUBJECT TITLE			GRADE	CREDIT
EEN-554	HVDC TRANSMISSION SYSTEMS			FS	4.00
EARNED CREDITS	0	TOTAL EARNED CREDITS	162	SGPA	0.000
REG. CREDITS	4			CGPA	5.136

STUDENT HAS NOT YET COMPLETED THE PROGRAMME

Evaluation and Grading : The student is graded for his/her academic performance on a ten point scale in the following manner:

Old Grading System (Applicable upto the batch 2014-15 session)

Outstanding - A+(10), Excellent - A(9), Very Good - B+(8), Good - B(7), Average - C+(6), Below Average - C(5), Marginal - D(4), Poor - E(2), Very Poor - F(0), Failed due to Short Attendance - FS(0), Audit Pass - AP, Audit Fail - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

New Grading System (Applicable from the batch 2015-16 session onwards)

Exceptional Good/Outstanding - O(10), Excellent - A(10), Very Good - B+(9), Good - B(8), Fair - C+(7), Average - C(6), Below Average - D+(5), Marginal - D(4), Fail due to poor performance - F(0), Failed due to Short Attendance - FS(0), Pass in Audit Course - AP, Fail in Audit Course - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

Note:-

The medium of instruction at this Institute is English.

Place: Roorkee

Dated: 7/10/2018

Assistant Registrar (Evaluation)

EEN-302 - 4
EEN-301 - 4
EEN-304 - 4
Roojat - 2+4 (1200)
DE-II - 4
DE-DE - 4
28

Appendix 'B'
Item No. Senate/74.13

S. No.	Enrol. No	Name	Branch	Total Earned Credits upto last sem.	MINIMUM CREDITS REQUIREMENT
1	15114051	PUNEET RAJHARIA	B.TEH. CSE	37*	46
2	17115027	BHUKYA BHARGAVA	B.TECH. EE	11*	22

* Excluding the credits of NCC/NSO/NSS

To

The Dean (Academics)

IIT Roorkee

Date- 23/07/2018

Subject - Request for continuation of program in spite of not fulfilling minimum credit requirements.

Dear Sir,

I am a student of B.Tech. (IIIrd Year) program at IIT Roorkee.

I was suffering from depression last year so I could not attend any classes and exams for the whole year and subsequently failed all the subjects. Therefor I could not fulfill the minimum credit requirement.

I am currently going through treatment and will be able to provide the documents for the same once my treatment is complete.

I request you to please consider my issue and kindly allow me to continue my studies. I assure you full hard work from my side now on. And I assure you that I will not be found guilty of any other further requirements.

Thanking You.

Yours Obediently

Name- Puneet Rajharia

Enroll. no- 15114051

Course- B.Tech. - IIIrd Year (SE)

Forwarded to DOAA
for necessary action.
as per Institute rules.

Forwarded

Sugata Ghosh 23/07/2018
Chairman DAPE

IAPC meeting
Vijal Pal Singh

23/7/18
प्रो. एवं विभागाध्यक्ष Prof. & Head
कम्प्यूटर विज्ञान एवं इंजी. विभाग
Dept. of Computer Science & Engg
आई. आई. टी. रूड़की I.I.T. Roorkee

23/7/18



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 15114051

NAME: PUNEET RAJHARIYA

PROGRAMME: BACHELOR OF TECHNOLOGY (COMPUTER SCIENCE)

SESSION 2016-17		SEMESTER Autumn	I	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT	
CEN-105	INTRODUCTION TO ENVIRONMENTAL STUDIES	D	3.00	
CSN-101	INTRODUCTION TO COMPUTER SCIENCE AND ENGINEERING	D+	2.00	
CSN-103	FUNDAMENTALS OF OBJECT ORIENTED PROGRAMMING	D	4.00	
HSN-001A	COMMUNICATION SKILLS (BASIC)	C+	2.00	
HSN-002	ETHICS AND SELF AWARENESS	C	2.00	
MAN-001	MATHEMATICS-I	D	4.00	
PHN-005	ELECTRODYNAMICS AND OPTICS	D	4.00	
EARNED CREDITS		21	TOTAL EARNED CREDITS	21
REG. CREDITS		21	SGPA	4.571
			CGPA	4.571

SESSION 2016-17		SEMESTER Spring	I	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT	
CSN-102	DATA STRUCTURES	F	4.00	
CSN-106	DISCRETE STRUCTURES	D	4.00	
ECN-102	FUNDAMENTAL OF ELECTRONICS	D	4.00	
ECN-104	DIGITAL LOGIC DESIGN	D	4.00	
MAN-010	OPTIMIZATION TECHNIQUES	FS	4.00	
PR-502	N.S.S.	C	2.00	
EARNED CREDITS		14	TOTAL EARNED CREDITS	35
REG. CREDITS		22	SGPA	2.727
			CGPA	3.628

SESSION 2017-18		SEMESTER Autumn	II	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT	
CSN-221	COMPUTER ARCHITECTURE AND MICROPROCESSORS	D	4.00	
CSN-291	OBJECT ORIENTED ANALYSIS AND DESIGN	F	4.00	
ECN-203	SIGNALS AND SYSTEMS	FS	4.00	
HSS-01	ECONOMICS	F	3.00	
MIN-106	ENGINEERING THERMODYNAMICS	F	4.00	
EARNED CREDITS		4	TOTAL EARNED CREDITS	39
REG. CREDITS		19	SGPA	0.842
			CGPA	2.774

SESSION 2017-18		SEMESTER Spring	II	
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT	
CSN-102	DATA STRUCTURES	F	4.00	
CSN-212	DESIGN AND ANALYSIS OF ALGORITHMS	F	4.00	
MAN-010	OPTIMIZATION TECHNIQUES	F	4.00	
MTN-105	ELECTRICAL AND ELECTRONIC MATERIALS	F	4.00	
EARNED CREDITS		0	TOTAL EARNED CREDITS	39
REG. CREDITS		16	SGPA	0.000
			CGPA	2.457

At the 2nd year
regu

→ 39 CR
→ 46 credits



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 15114051

NAME: PUNEET RAJHARIYA

PROGRAMME: BACHELOR OF TECHNOLOGY (COMPUTER SCIENCE)

STUDENT HAS NOT YET COMPLETED THE PROGRAMME

Evaluation and Grading : The student is graded for his/her academic performance on a ten point scale in the following manner:

Old Grading System (Applicable upto the batch 2014-15 session)

Outstanding - A+(10), Excellent - A(9), Very Good - B+(8), Good - B(7), Average - C+(6), Below Average - C(5), Marginal - D(4), Poor - E(2), Very Poor - F(0), Failed due to Short Attendance -FS(0), Audit Pass - AP, Audit Fail - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

New Grading System (Applicable from the batch 2015-16 session onwards)

Exceptional Good/Outstanding - O(10), Excellent - A(10), Very Good - B+(9), Good - B(8), Fair - C+(7), Average - C(6), Below Average - D+(5), Marginal - D(4), Fail due to poor performance - F(0), Failed due to Short Attendance -FS(0), Pass in Audit Course - AP, Fail in Audit Course - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

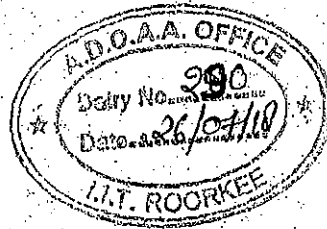
Note:-

The medium of Instruction at this Institute is English.

Place: Roorkee

Assistant Registrar (Evaluation)

Dated: 7/25/2018



23/07/2018,

To,
Dean of Academic Affairs.

Respected Sir,

I am B. Bhargav, student in the ele and engg branch. Requesting you to promote me to the second year. Sir, I have secured only 13 credits in the first year. Sir, As per the rules and regulations of the institution I didn't secure 22 credits. So, please Sir, I kindly request you to promote me to second year. Due to medical problems I couldn't study well. please allow me to promote in second year.

Yours Sincerely,
B. Bhargav
Reg. No: 17115027
Electrical dept.

Please get
re. recommendations
of APC & get
it forwarded by HOD
23/07/18

APCC
Associate Dean
Academic Affairs-Curriculum

Forwarded &
Recommended as per rules
Indra
25/7/18
Chairman DAPC
Deptt. of Electrical Engg.
IIT Roorkee

F
25/7/18
P.T.



INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

OFFICIAL TRANSCRIPT (Statement of Earned Credits & Grades)

ENROLLMENT NO. OF THE STUDENT: 17115027
PROGRAMME: BACHELOR OF TECHNOLOGY (ELECTRICAL)

NAME: BHUKYA BHARGAV

SESSION 2017-18		SEMESTER Autumn			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
CEN-105	INTRODUCTION TO ENVIRONMENTAL STUDIES	D	3.00		
EEN-101	INTRODUCTION TO ELECTRICAL ENGINEERING	F	2.00		
EEN-103	PROGRAMMING IN C++	F	4.00		
HSN-001A	COMMUNICATION SKILLS (BASIC)	D	2.00		
HSN-002	ETHICS AND SELF AWARENESS	D+	2.00		
MAN-001	MATHEMATICS-I	F	4.00		
PHN-003	ELECTROMAGNETIC FIELD THEORY	F	4.00		
EARNED CREDITS		7	TOTAL EARNED CREDITS	7	SGPA 1.429
REG. CREDITS		21	CGPA 1.429		

SESSION 2017-18		SEMESTER Spring			
SUBJECT CODE	SUBJECT TITLE	GRADE	CREDIT		
EEN-102	NETWORK THEORY	F	4.00		
EEN-104	ELECTRICAL MEASUREMENT AND MEASURING INSTRUMENTS	D	4.00		
EEN-106	ANALOG ELECTRONICS	F	4.00		
MIN-106	ENGINEERING THERMODYNAMICS	D	4.00		
PR-501	N.C.C.	C	2.00		
EARNED CREDITS		10	TOTAL EARNED CREDITS	17	SGPA 2.444
REG. CREDITS		18	CGPA 1.897		

STUDENT HAS NOT YET COMPLETED THE PROGRAMME

Evaluation and Grading : The student is graded for his/her academic performance on a ten point scale in the following manner:

Old Grading System (Applicable upto the batch 2014-15 session)

Outstanding - A+(10), Excellent - A(9), Very Good - B+(8), Good - B(7), Average - C+(6), Below Average - C(5), Marginal - D(4), Poor - E(2), Very Poor - F(0), Failed due to Short Attendance -FS(0), Audit Pass - AP, Audit Fail - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

New Grading System (Applicable from the batch 2015-16 session onwards)

Exceptional Good/Outstanding - O(10), Excellent - A(10), Very Good - B+(9), Good - B(8), Fair - C+(7), Average - C(6), Below Average - D+(5), Marginal - D(4), Fail due to poor performance - F(0), Failed due to Short Attendance -FS(0), Pass in Audit Course - AP, Fail in Audit Course - AF, Incomplete Course - I, Incomplete Project/Dissertation X, Satisfactory completion of Dissertation - S, Unsatisfactory Dissertation - U, Withdrawl - W, Non-completion of course requirement and/or training - Z

Note:-

The medium of Instruction at this Institute is English.

Place: Roorkee

Assistant Registrar (Evaluation)

Dated: 8/2/2018

Item No. 74.14: To consider requests of two faculty members for allowing joint supervision of Ph.D. candidates enrolled in AIIMS, Rishikesh and Lulea Technical University, Sweden.

The IRC in its 21st meeting held on 16.07.2018 discussed the requests made by two faculty members (**Appendix 'A'**) in the light of a clause in the existing guidelines which allows joint supervision if the host institute has a mandatory provision of sending its Ph.D. thesis to a foreign examiner for evaluation (**Appendix 'B'**). One of the institutions is AIIMS, Rishikesh and the other is Lulea University of Technical, Sweden which has an MOU with IIT Roorkee (**Appendix 'C'**). Both these institutions do not have the said provision for evaluation of their PhD thesis.

After deliberations, the IRC considered and recommended the requests.

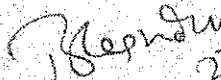
The recommendation of IRC is placed for the consideration and approval of the Senate.

March 29, 2018


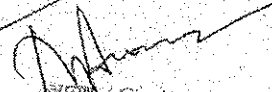
The Dean of Academic Affairs

Through Proper Channel

I wish to co-supervise Mr. Binaya Baidar at Lulea Technical University (LTU), Sweden with Prof. Michel Cervantes as Principal Supervisor. A letter received from LTU is attached. We have MoU with LTU. It is requested to kindly permit me for the same.


(B. K. Gandhi) 29/3/18

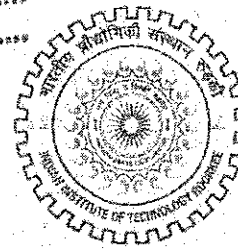

7/4/18



Chairman
Dr. J. K. Singh / DRC
Dr. J. K. Singh / M. & L. E. D.
Dr. J. K. Singh / I.T. Rector

Dr. Sohom Chakrabarty
Assistant Professor
Electrical Engineering Department
Indian Institute of Technology Roorkee
Roorkee, India. Pin – 247667.

Email: sohomfee@iitr.ac.in, c.sohom@gmail.com
Phone: +91-1332-284880, +91-9432270633

Academic Section
I.I.T. Roorkee
Diary No. 554
Dated. 13/2/18



Date: 13 February 2018

To
Dean Academic Affairs
IIT Roorkee

SUB: Permission to be Co-Guide for External Student

Dear Sir,

I have received a request from Dr. Anissa Atif Mirza of AIIMS, Rishikesh to be co-guide to her student Ms. Shikha Mudgal for her PhD project "A study to identify driver mutations using whole exome sequencing and develop simulation model in gallbladder cancer".

In this context, I wish to state that parts of her project involve using machine learning techniques in which I am currently working and wish to develop further research potential. Thereby, I request you to please approve myself to be co-guide of Ms. Shikha Mudgal for her PhD project.

Thank you for your support and cooperation.

Sincerely,

A handwritten signature in black ink, appearing to be "Sohom", with a horizontal line underneath.

Dr. Sohom Chakrabarty
Assistant Professor
Electrical Engineering Department
Indian Institute of Technology Roorkee

F
13/2/18
Prof. & Head, Elec. Engg. Dept.
I.I.T. Roorkee

Attached: Original Letter from AIIMS Rishikesh with Request of Co-Guidance

Dr. Sohom Chakrabarty, Assistant Professor, EED, IIT Roorkee

Guidelines for Supervision of Ph.D. Students of Other Institutes/ Universities

A faculty member of IIT Roorkee may supervise and guide Ph.D. students of other institutes/universities subject to following conditions:

- a) The host Institution/University is recognized by MHRD-UGC/AICTE or a foreign Institute/University of repute.
- b) The request must be forwarded by the competent authority of the host institution.
- c) The concerned faculty should have guided/guiding at least one Ph.D. student registered at IIT Roorkee.
- d) The total number of such externally enrolled Ph.D. students under any faculty of IIT Roorkee, should not be more than 2 (two) at any point of time.
- e) Due to extension of this facility to the host institution, the work of the IIT Roorkee should not suffer.
- f) If the concerned faculty of IIT Roorkee, as supervisor of thesis of students of another institute/university is required to visit outside, he/she shall seek specific approval for the visit on Casual Leave/leave as due, by the competent authority and shall not be on duty for the visit. Further, the expenses, facilities etc. in this regard shall not be borne by the IIT Roorkee.
- g) If the external candidate wishes to avail the facilities at IIT Roorkee, he/she shall register as casual student for a period not exceeding six months by paying tuition fee being charged from the research student/candidate of IIT Roorkee as per rules and regulations and pay for all other facilities here.
- h) The host Institution/University as per regulations appoints a foreigner as one of the examiners for Ph.D. thesis or else it is recognized by IIT Roorkee for this purpose. Wherever, the foreign examiner is not appointed, the Director is authorized to take such a decision. A Standing committee of Dean, Academics, Dean (Faculty Affairs) and the concerned Head of the Department/Centre is constituted to consider such requests from the host institution.

Appendix 'C'
Item No. Senate/74.14

Saturday, January 27, 2018

Dean of Students' Welfare

Sub.: Dual Degree program

With reference to my email dated 9 December 2017, I am again enclosing the dual degree program and procedure existing in one of the university with which we have MoU. Two of the foreign university delegations have discussed regarding dual degree program for Ph D students. The matter was also discussed during the IOE meeting at MAC and the Director.

I request you to kindly formulate some procedure in our institute for dual degree programs.

B K Gandhi
27/1/2018
(B K Gandhi)

Professor MIED

Encl.: As stated

✓ CC to: Dean of Resources and Alumni Affairs

Applicant's Guide to Double PhD Programmes

Stage 1:

The applicant needs to demonstrate that (not an exhaustive list):

- There is a long-standing and well-established collaboration between the two Universities, which exists at the time of the application. This should be evidenced by an existing Memorandum of Understanding, any Research Collaboration Agreements, evidence of joint publications and other research activities, evidence of joint educational activities.
- The possible double PhD Programme will be of scientific and educational importance and advantage for LTU in the future. NB: The double PhD Programme, if created, will encompass all Departments at LTU. Where it is possible to identify, please identify any other potential LTU departments that may benefit from the creation of this Programme.
- This Programme is not created as a one-off for an individual student. The Applicant needs to show that they intend the programme to be used extensively in the future.
- The possible double PhD Programme will be of strategic importance for LTU. Regard can be made to the Partner University's national and international academic rankings and the brand (in the broadest sense) compatibility between the two institutions.
- The application is supported by the applicant's Head of Department.

Stage 2:

The applicant needs to demonstrate that (not an exhaustive list):

- There is a clear description of work for the individual Programme. In particular, the applicant needs to describe the nature and area of joint research (which will be used in the Programme), overall strategy and objectives of the Programme, time plan, how the Programme will be managed, and the scientific and educational inputs and outputs for each Institution.
- The Universities will create a compatible Programme. In particular, the applicant needs to provide a working draft on all course work, publication, and any other requirements for each PhD candidate to successfully complete the Programme (the applicant does not need to be very specific). Division must be made between LTU and the Partner Institution's requirements so it is clear for the candidate as to what/where/when he or she must satisfy the prerequisite requirements for the successful attainment of a PhD at each Institution. NB: Please provide information on how your Programme plan will achieve the 'Thesis PLUS' requirement. For more on this, please see the slides on the difference between Double and Joint PhDs.

Dual Award Doctoral Programme (Programme Framework) Agreement

This Agreement is made on the 20th day of April, 2016

BETWEEN

LULEÅ UNIVERSITY OF TECHNOLOGY (org. no: 202100-2841) located at the University Campus,
Persön, SE 97187, Luleå, Sweden

(LTU)

AND

UNIVERSITY POLITEHNICA OF BUCHAREST (CUI 4183199) located at Splaiul Independentei nr. 313,
sector 6, Bucharest, Romania

(UPB)

Background:

- A. The Parties wish to establish a student exchange programme. The Programme seeks to broaden the scope of the academic curriculum and to provide a unique learning experience for students including time to be spent in an overseas environment, as well as to promote cooperation between the Institutions as set out in the Memorandum of Understanding between Luleå University of Technology, Sweden and University Politehnica of Bucharest, Romania (DNR 379-2016-1 (LTU)).
- B. In particular, the Parties' intention is to create a dual award doctoral programme that is planned and implemented by both Parties.
- C. This Agreement sets out the general Terms and Conditions as agreed by the Parties for the purposes of such a Programme.

It is AGREED:

1. Definitions and Interpretation

1.1 In this Agreement, unless the contrary intention appears:

Home Institution in relation to a candidate means the institution named in the Individual Dual-Award Thesis Agreement, being either the institution at which the candidate was originally enrolled and applied to participate in the Programme or the institution at which the candidate intends to spend the greater period of time;

Host Institution in relation to a candidate means the institution other than the Home Institution;

Intellectual Property means any copyright work, circuit layout, eligible layout, design, patent, invention, confidential information, know-how, plant variety, trade mark or other insignia of origin and any related right;

Institution means either LTU or UPB;

Institutions mean LTU and UPB collectively;

Dual award means a double award, encompassing a Degree of Doctor of Philosophy (PhD) at LTU and UPB, conferred separately upon a candidate by the Parties on the candidate's successful completion of the Programme;

Programme means the dual award doctoral programme;

- 1.2 A reference to the "regulations" of a Party shall be taken to include all statutes, regulations, rules, policies, procedures or otherwise named documents of that Party, as the case requires.

2. Term

This Agreement shall remain in force for a period of six (6) years from the date of the last signature of this Agreement. The Agreement may be extended by mutual consent of the two Institutions.

3. Operation of the Agreement

3.1. The Parties agree that the Programme will be administered and conducted in accordance with the following regulations:

- a) LTU: The relevant laws and regulations for conducting doctoral research are found in the Högskolelag (1992:1434) (Higher Education Act 1992) and all amendments; Högskoleförfordning (1993:100) (Higher Education Ordinance 1993) and all amendments; and Riktlinjer för dubbel examen respektive gemensam examen på forskarnivå vid Luleå tekniska universitet (Guidelines for double degree and joint degree at third-cycle level at Luleå University of Technology (DNR 1194-13 (LTU)). For further information regarding doctoral research at Luleå University of Technology, please refer to LTU's handbook for third-cycle studies.
- b) University Politehnica of Bucharest: The relevant laws and regulations for conducting doctoral research are found in Codul Studiilor Universitare de Doctorat (HG 481/2011) (Doctoral Studies Code) and Legea Educației Naționale (1/2011) (National Education Law).

3.2. The general responsibility for doctoral candidature matters at:

- a) Luleå University of Technology, is vested in the Faculty of Science and Technology Board (TFN) and Faculty of Humanities and Social Sciences Board (FFN) (depending on the subject matter of the individual Programme).
- b) University Politehnica of Bucharest, is vested in Power Engineering Faculty Board (FE) and Power Engineering Doctoral School Board (SDE).

3.3. All faculties at both Institutions are able to participate in this Dual Programme.

3.4. Upon the successful entrance into force of this Agreement, the Parties shall execute a separate agreement specific for each individual Programme ('Programme Agreement'). Such an agreement must have the following information (this list is not exhaustive):

- a) Details of key persons. In particular, the names of academic coordinators from both Institutions; the names of heads of the academic units at both Institutions; and the names of the administrative coordinators at both Institutions.
- b) The prescribed number of candidates for each individual Programme.
- c) Course work requirement.
- d) Examination requirements. In particular, information regarding the Doctoral Thesis, how they will be assessed and all of the necessary procedures of the public defence must be set out.

- e) Any specific supervision requirements.
- f) Procedure as to the publication of the thesis.

3.5. For each candidate who is admitted into the Programme under the specific Programme Agreement, the Parties shall execute a candidate-specific agreement which sets out the details of the candidate's participation in that Programme. Such an agreement will be entitled the Individual Dual-Award Thesis Agreement. This Agreement must be executed, where practicable to do so, prior to the commencement of the Programme.

3.6. To comply with mandatory Swedish legislation, the Parties shall also execute an Individual Study Plan. Such Plan shall be executed simultaneously with the Individual Dual-Award Thesis Agreement. It must contain the undertakings made by the doctoral student and the Institutions and a timetable for the doctoral student's study Programme. The Plan shall be adopted after the consultation with the doctoral student and his or her supervisors.

3.7. Each candidate will undertake his or her doctorate in accordance with this Agreement, the Programme Agreement, the Individual Dual-Award Thesis Agreement and the Individual Study Plan. It is the duty of the Home Institution of each candidate to provide him or her with a copy of these documents.

4. Exchange of candidates

4.1. The Parties will aim to have a reasonable balance in the number of candidates exchanged. The Parties will review the Programme annually to determine whether there is an imbalance in the number of candidates exchanged and will adjust the number over the term of this Agreement (as necessary) to maintain a reasonable balance in the exchange.

4.2. The duration of the Agreement will be at least until the final candidate undertaking the Programme has completed the requirements for his or her degree.

5. Selection of participants

5.1. The Programme will be open to eligible candidates for the Degree of Doctor of Philosophy at LTU and UPB.

5.2. Each Party will screen its applicants for the Programme and reserves the right to make a final judgment on the admissibility of each applicant nominated for entry into the Programme.

5.3. A candidate will not be admitted into the Programme unless he or she satisfies the admission requirements, including the language proficiency requirements, of the Host Institution.

5.4. Participation in the Programme will depend on the availability of appropriate supervision, resources and facilities at the Institutions.

6. Financial and other responsibilities of the Parties

6.1. Each Party will nominate one individual to fulfil the responsibilities of liaison officer to facilitate candidate exchanges under this Agreement. Liaison officers will exchange all relevant information about the Programme offered at their respective Institutions.

6.2. For each candidate from the Home Institution, the Host Institution will –

- a) enrol the candidate;
- b) offer the candidate the full range of services provided to all other enrolled doctoral candidates.

6.3. The Host Institution will assist (to the extent possible) in the provision of the necessary documents to enable a candidate to obtain a student visa in the country of the Host Institution. In addition to this, the Host Institution will advise (to the extent possible) in relation to the matters listed under section 7.2 (a) to (e) of this Agreement.

6.4. The Host Institution acknowledges that candidates will pay all enrolment/tuition fees and charges (as applicable) to the Home Institution and agrees to exempt candidates from all requirements to pay enrolment/tuition (or otherwise named) fees at the Host Institution.

7. Candidate responsibilities

7.1. The Parties agree that all candidates will be responsible for:

- a) registration and renewal of enrolment at the Institutions for each year of candidature;
- b) payment of tuition/enrolment (and other required fees) at his or her Home Institution;
- c) obtaining the required student visa and any other documents which cover temporary residency in the country of the Host Institution;
- d) purchasing the required health insurance while in the country of the Host Institution;
- e) ensuring that he or she has adequate income support in addition to any scholarship support to cover all costs associated with participating in the Programme.

7.2. The Parties acknowledge that all candidates, unless otherwise agreed, will be responsible for the following expenses or costs:

- a) transportation to and from Host Institution;
- b) room and board expenses;
- c) textbooks, clothing and personal expenses;
- d) passport and visa costs; and
- e) all other debts and incidental expenses incurred during the course of the Programme.

8. Conditions of candidature

8.1. Candidates will be required to abide by –

- a) all regulations pertaining to the Programme as set out in Article 3.1 of this Agreement or otherwise in this Agreement; and
- b) all other regulations of the Institutions.

8.2. While at the Host Institution, candidates will have the rights, privileges and responsibilities of other doctoral candidates enrolled at the Host Institution except where otherwise specified in Clause 8.

8.3. Upon completion of a period of study at a Host Institution, candidates will be required to return to their Home Institution. Any extension of stay must be approved by both Parties.

8.4. The Home Institution guidelines and regulations pertaining to the following shall apply:

- a) development of research proposal;
- b) confirmation of candidature;

- c) duration of candidature, subject always to the duration set out in the Individual Dual-Award Thesis Agreement;
- d) on-going formal assessment of progress; and
- e) variations to candidature.

8.5. When a candidate is at the Host Institution, the Host Institution guidelines and regulations pertaining to the following shall apply:

- a) occupational health, safety and environment protocols; and
- b) grievance and appeal procedures.

8.6. Candidates will be required to meet the ethics approval requirements of both Parties.

8.7. While participating in the Programme, candidates will be subject to the regulations of the Parties, including regulations regarding:

- a) exclusion from an institution for disciplinary, research misconduct or any other reason; and
- b) termination of candidature.

8.8. Where there is a conflict between the regulations of the Parties in relation to –

- a) exclusion from an institution for disciplinary reasons, the regulations of the institution where the act (which is subject to disciplinary action) occurred will be applied; or
- b) exclusion from an institution for research misconduct or any other reason or termination of candidature, the regulations of Home Institution will be applied.

9. Length of time at each institution

9.1. A candidate will undertake his or her doctorate at both Institutions, spending alternate periods of time (for research and educational purposes) at each Institution.

9.2. The candidate will spend a minimum of 12 months of their candidature at the Host institution.

9.3. The Parties acknowledge that the exact schedule and length of the period of time spent at each Institution will depend upon the advances and evolution of the project. The period of time a candidate will spend at the Host Institution must be set out in the Individual Dual-Award Thesis Agreement.

10. Doctoral Thesis

10.1. Examination of the examinable components will be in accordance with –

- 10.1.1. the regulations of the Parties as set out in Article 3.1 of this Agreement; and
- 10.1.2. any additional terms set out in the Programme Agreement(s).

10.2. The student shall be able to transfer credits for a successfully completed coursework or training component of a Programme from one Institution to another Institution without special review.

11. Supervision

11.1. A candidate will undertake his or her project with a minimum of one supervisor from each Institution. Each Institution shall appoint one principal supervisor. Where a doctoral candidate has a problem or

seeks advice on any matter arising from the Programme, he or she should contact the principal supervisor of the Institution he or she is currently present at.

11.2. The principal co-supervisors of a doctoral student admitted for a doctoral degree must be qualified as docent or professor or a person holding an equivalent position at UPB.

11.3. The principal co-supervisors are responsible for the student's thesis and/or examinations.

11.4. The co-supervisors will collaborate in their guidance of a candidate and will combine their efforts and communicate regularly with one another in order to evaluate the progress of the candidate in his or her project.

11.5. The Parties, through the offices of the co-supervisors, undertake to exchange all information and documentation useful for the purposes of organising the co-direction of the candidate's project.

11.6. The student has a right to change a supervisor.

12. Publication of thesis

All issues regarding the thesis publication should comply with the Parties' internal regulations. The specific requirements on this topic should be laid down in the Programme Agreement.

13. Award of the degree

13.1. Subject to the satisfactory completion of the examination requirements, each Party will award the Degree of Doctor of Philosophy to a candidate according to the usual procedures of the Parties.

13.2. The degree will be a dual award.

13.3. The Degree of Doctor of Philosophy will be awarded to a student who can demonstrate a thorough understanding of a substantial body of knowledge that is at the forefront of their academic discipline, and if necessary, an area of a professional practice (whichever applies to the individual student). The student must also demonstrate a clear understanding of how an original contribution to knowledge, through his or her doctoral work, can be made. He or she must be able to undertake research at an advanced level, be able to implement his or her research in his or her academic discipline or area of professional practice and have the ability to make informed judgments in complex situations.

13.4. Specific learning outcomes of the individual Programme will be found in the Individual Dual-Award Thesis Agreement. It will state how responsibility between the two Institutions will be divided in order to achieve the said learning outcomes.

13.5. The degree will be evidenced by a testamur or testamurs agreed by the Parties in the Programme Agreement.

14. Intellectual property

14.1. Unless expressly varied by the Programme Agreement or the Individual Dual-Award Thesis Agreement, the following provisions will apply in relation to intellectual property.

14.2. A candidate will own copyright in his or her thesis.

14.3. Where a candidate creates Intellectual Property during the course of the project (other than the copyright in his or her thesis), the candidate will own that Intellectual Property unless, the candidate has assigned his or her rights to one or both of the Parties. An assignment by the candidate must be in writing.

14.4. The Individual Dual-Award Thesis Agreement shall, amongst other things, specify the candidate's Intellectual Property rights. The Candidate Schedule should list the requirements of an oral

examination, and should also state that it is the responsibility of each candidate to protect their Intellectual Property rights in a timely manner before such matters become public.

15. Privacy

15.1. The Parties acknowledge that the exchange of candidates will involve the exchange of private and/or personal information and that the parties must comply with the following privacy legislation of the Parties:

- a) LTU: Offentlighets- och sekretesslag (2009:400) (Public Access to Information and Secrecy Act 2009)
- b) University Politehnica of Bucharest: Legea pentru protectia persoanelor cu privire la prelucrarea datelor cu caracter personal si libera circulatie a acestor date (677/2001) cu amendamentele ulterioare (Law for protection of individuals regarding processing of personal data and free transfer of the data).

15.2. At the commencement of this Agreement and from time to time throughout the term of this Agreement, a Party may notify the other of any necessary steps that must be taken to ensure compliance with the Privacy Legislation governing that party.

15.3. Upon receiving notification under clause 15.2, a party will take all reasonably necessary steps to assist the notifying party to comply with the Privacy Legislation governing that party.

16. Variation

This Agreement may be varied in writing signed by the Parties. Such variations, once approved by the Parties, will become part of this Agreement.

17. Termination

17.1. This Agreement may be terminated by either Party giving the other twelve (12) months notice in writing.

17.2. Either Party may terminate this Agreement to the extent that it relates to a particular candidate by notifying the other party in writing.

17.3. A Party may only terminate this Agreement in accordance with clause 17.2 if the candidate-

- a) fails to re-enrol by the required time at either institution;
- b) withdraws from the Programme;
- c) is excluded from either institution for disciplinary, research misconduct or other reasons;
- d) does not have his or her candidature confirmed;
- e) has his or her candidature terminated.

17.4. For the avoidance of doubt, where the Agreement is terminated pursuant to clause 17.2, the Host Institution is entitled to immediately cancel the candidate's enrolment at that institution and discontinue the candidate's research and research training.

18. Consequences of termination or expiry of this Agreement

Where there is one or more candidate undertaking a doctorate pursuant to this Agreement at the time of -

- a) termination under clause 17; or

b) the expiry of this Agreement,

the Parties agree to honour the arrangements in relation to those candidates until such time as the last candidate completes his or her degree.

19. Mandatory national law

Nothing in this Agreement shall be deemed to require an Institution to breach any mandatory national law under which the Institution is operating.

20. Settlement of disputes

Both Parties shall act in good faith, and shall try to find ways to resolve a dispute between them before submitting themselves to the procedure specified below.

Any dispute, controversy or claim arising under, out of or relating to this contract and any subsequent amendments of this contract, including, without limitation, its formation, validity, binding effect, interpretation, performance, breach or termination, as well as non-contractual claims, shall be submitted to mediation in accordance with the WIPO Mediation Rules. The mediation shall be held by videoconferencing or in a mutually agreed location. The language to be used in the mediation shall be English unless otherwise agreed upon.

If, and to the extent that, any such dispute, controversy or claim has not been settled pursuant to the mediation within 60 calendar days of the commencement of the mediation, it shall, upon the filing of a Request for Arbitration by either party, be referred to and finally determined by arbitration in accordance with the WIPO Expedited Arbitration Rules. Alternatively, if, before the expiration of the said period of 60 calendar days, either party fails to participate or to continue to participate in the mediation, the dispute, controversy or claim shall, upon the filing of a Request for Arbitration by the other party, be referred to and finally determined by arbitration in accordance with the WIPO Expedited Arbitration Rules. The place of arbitration shall be Brussels unless otherwise agreed upon. The language to be used in the arbitral proceedings shall be English unless otherwise agreed upon.

EXECUTED as an Agreement:

SIGNED for and on behalf of LILEA UNIVERSITY OF TECHNOLOGY by

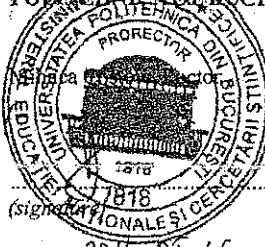
Prof. Johan Sterte, Vice-Chancellor

(signature)

2016-04-19

(date)

SIGNED for and on behalf of UNIVERSITY POLITEHNICA DE BUCURESTI by



(signature)

2016.03.16

(date)

Item No. 74.15: To consider the request of Mr. Manohare Manish Purushottam, 17511008, MURP who has switched over to Ph.D. program and has also got a PMRF Seat at IIT Roorkee.

The IRC in its 21st meeting held on 16.07.2018 discussed the request of Mr. Manohare Manish Purushottam (Enr. 17511008). In the case of a Ph.D. switchover from M.Tech/MURP, the student gets both M.Tech. and Ph.D. degrees while the PMRF scheme is for admission to the PhD program. Mr. Manohare has requested that he may be allowed to retain the benefit of both the degrees i.e. M.Tech. and Ph.D. under switchover, and also the enhanced assistantship under PMRF.

The IRC recommended that the two schemes can be combined.

The recommendation of IRC is placed for the consideration and approval of the Senate.

Item No.74.16: To ratify the admission of Mr. Surya Kumar Singh under Part-Time Sponsored Category in Autumn 2018.

The IRC in its 21st meeting held on 16.07.2018 discussed the above case. The candidate is working in one of the units of ONGC. The last date of application was March 20, 2018. At that time the admission criteria specified that the unit in which the applicant is working shall be in the list of approved R&D institutions/ organizations or should have an MOU with IIT Roorkee. This clause was modified by the 72nd Senate in its meeting held on March 22, 2018 (**Item 72.7, Appendix 'A'**). IRC discussed the request in line with the recommendations of the 72nd Senate and recommended that the candidate be given admission under the Part-Time Sponsored category.

The Chairman Senate has approved the admission on the recommendation of the IRC.

The above is placed for ratification by the Senate.

Item No. 72.7: To consider the revision in the criteria for direct admission in Part-time Ph.D. programme.

IRC in its 19th meeting held on February 16, 2018 recommended as follows:

- (i) Organisation shall be considered by the DRC, on case-to-case basis.
- (ii) Organisation/institution shall not be a degree awarding organisation/institution or shall not be affiliated to any such organisation/institution.
- (iii) The requirement of a co-supervisor at the place of work or in the organization is not mandatory.
- (iv) NOC shall be required for such candidates.

The recommendation is placed for the consideration and approval of the Senate.

Item No. 72.7: To consider the revision in the criteria for direct admission in Part-time Ph.D. programme.

The Senate approved the proposal.

Item No. 72.8: To consider and approve the seat matrix of PG programs for the academic year 2018-2019.

The Senate approved the proposal as given in Appendix 'B'.

Item No. 72.9: To consider to reinstate the Merit Cum Means (MCM) Scholarship from 2018-19.

The Senate approved the proposal.

Item No. 72.10: To consider the issuance of a certificate to the Ph.D. research scholars, if requested.

The Senate approved the proposal as given in Appendix 'C'.

Item No. 72.11: To consider the Online procedure for application and seat allocation (to candidates) related to M.Tech/M.Arch./MURP.

The Senate approved the proposal as given in Appendix 'D'.

Item No. 72.12: To consider the mercy request of Mr. Maheshbhai J. Vanajara, Enrolment No. 17920027, QIP Ph.D. Scholar in Mech. & Indl. Engg. Department to allow taking one additional subject in Spring Semester so as to fulfil course work CGPA requirement.

The Senate approved the proposal.

Item No. 72.13: To consider waiving off of course work requirement for the candidates who have completed PG degree requirements (M.Tech./M.Arch./MURP) from IITR or any other IIT or IISc.

The Senate approved the proposal. Further, decided that IISERs and IIMs be also considered for M.Sc. & MBA, respectively.



17/12/20

Item No. 74.17: To consider the following appeals of students:

- (a) Three students, who are faculty at NIT Uttarakhand and have completed M.Tech. from IIT Roorkee, have requested to admit them in the Ph.D. programme and to give them waiver in course work. (Appendix 'A')**
- (b) Mr. Sompal Singh, En. No. 17919011, research scholar in the Department of Mathematics, has made an appeal to allow him to repeat the year to improve CGPA of course work in Ph.D. programme. (Appendix 'B')**
- (c) Mr. Sarvesh Kumar (Enr 17919010), Research Scholar, Deptt of Mathematics has requested to give him a chance to improve the grades of a course on Finite Element Method to improve CGPA in course work in PhD program. (Appendix 'C')**
- (d) Mr. Raj Kumar Mishra, JRF, MIED requested that he may be allowed admission to the Ph.D. programme for Autumn semester 2018-2019 under Project Category (Appendix 'D')**
- (e) Two research students who could not either meet or are not likely to meet the requirement of 7.000 CGPA in pre Ph.D. courses have appealed for continuation of their Ph.D. programme. (Appendix 'E')**

The IRC in its 21st meeting held on 16.07.2018 examined these appeals and decided to recommend as follows:

- (a) In case of faculty of NIT Uttarakhand, IRC examined the MoU between IIT Roorkee and NIT Uttarakhand and notification No. Acd./4668/Ph.D.-01 dated 12th April 2017 (Appendix 'F'). According to the notification one time approval was given to the students (faculty of NIT Uttarakhand) who completed M.Tech. with CGPA ≥ 7.500 regarding switch over to the PhD program in 2016-2017 with course waiver. Those who were in the first year were given similar approval if the CGPA > 8.500 . It was noted that the students who would complete M.Tech. afterwards can be admitted to the Ph.D. Program. IRC, while**

considering the above facts and decisions taken by the Senate recommended that:

(b) The students can be admitted to the Ph.D. program as they belong to the last batch under Teacher Trainee Scheme of MoU.

(c) The course waiver can be given only as per the criteria approved by the 72nd Senate under item number 72.13. **(Appendix 'G')**

(d) IRC has not recommended the request of Mr. Sompal Singh.

(e) IRC has not recommended the request of Mr. Sarvesh Kumar.

The IRC in its 22nd meeting held on 16.07.2018 examined and discussed the appeals of the students and decided to recommend as follows:

(f) According to 72nd Senate (item 72.3) the project fellow should have one year left in the project at the time of registration in the Ph.D. program **(Appendix 'H')**. Mr. Raj Kumar Mishra, JRF, MIED initiated his application on March 26, 2018 and his project is due to complete on March 31, 2019. His application got delayed while getting necessary approvals from different offices. However, the NOC issued from the SRIC office says that the approval be considered from March 26, 2018. The IRC considered the request of Mr. Raj Kumar Mishra and recommended that he be admitted to the Ph.D. programme.

(g) The IRC discussed the cases and recommended that one-time probation, as proposed by Prof. Manish Shrikhande Committee, be given to such students to complete her requirement as stipulated in the Ordinances, subject to the approval of the committee report by the Senate.

The cases at points (b) and (c) above can also be re-looked at in the light of the recommendation of IRC in its 22nd meeting.

The recommendation of IRC is placed for the consideration and approval of the Senate.

Appendix 'A'
Item No. Senate/74.17

To
The Dean Academics Affairs
IIT Roorkee
Date: 10th July 2018

Sub: Application for admission in Sponsored Part time Ph.D. programme without coursework after completion M.Tech by Trainee Teachers 2016 i.e last batch as per Joint Trainee Teacher Scheme of IIT Roorkee and NIT Uttarakhand.

Respected Sir,

We wish to inform you that, we are Trainee Teachers who are selected in 2016 (Copy of letter no. IITR/PG Adm. 16/2275 dated 19/07/2016 attached) under Joint Scheme of IIT Roorkee and NIT Uttarakhand (Copy of MoU and Trainee Teacher Scheme attached) for complete sponsored part-time M.Tech and PhD Programme within 5 to 8 year. We completed our M.Tech (Sponsored) at IIT Roorkee under Trainee Teacher Scheme this year. Under same scheme we have to complete our sponsored Part-time PhD programme from IIT Roorkee. All details of registered Trainee Teacher in the scheme with M.Tech CGPA are given in below table.

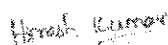
Sl.No.	Enrollment No.	Name of Student	3 rd sem. CGPA	4 th sem. CGPA
1	16529008	Himesh Kumar	7.560	7.941
2	16524018	Neeraj Kumar	8.120	8.353
3	16534017	Vivek Kumar	8.941	9.210

As per the notification No. Accd. /4633/UG-15, senate IIT Roorkee approved the provision for one time switchover to Ph.D Programme without coursework requirements after completion of M.Tech for those students who registered at IIT Roorkee under trainee teacher scheme till date and MoU will changed after that.

Being the last batch under joint Trainee Teacher scheme of IIT Roorkee and NIT Uttarakhand, we request you to please allow us to register in sponsored part time PhD programme as per MoU and senate notification on Trainee Teacher scheme.

Thanking you

Yours sincerely


Himesh Kumar

(Dept. of Electrical Engg.)

+ 91-7895280437
himesh6kr77@gmail.com


Neeraj Kumar

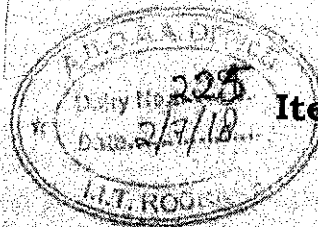
(Dept. of Civil Engg.)

+91-7983748776
neeraj.gangyan@nitwk.ac.in


Vivek Kumar

(Dept. of E & C Engg.)

+ 7895759350
kumar.vivekbhagat@gmail.com



Appendix 'B'
Item No. Senate/74.17

Date: 22/06/2018

To
The Dean of Academic Affairs
I.I.T. Roorkee

Subject: Mercy Appeal

Reference: your notification No. Aed./7839/UG-15

Respected Sir,

I, Sompal Singh, am a Ph.D. student in the Mathematics Department under Prof. P.N. Agrawal. Since July, 2017, I have done four courses in the past two semesters with a C.G.P.A. 4.5. I could not study properly due to the serious condition of my father and myself also in the last semester because my father was admitted to PGI hospital, Chandigarh in the emergency ward. Further due to the anxiety of not performing well in the last semester, in this semester also, I could not perform better inspite of working very hard.

Sir, I did my M.Sc. from I.I.T. Roorkee during 2009 - 2011. I have 4.5 years teaching experience from Delhi University and other reputed engineering colleges. I have also qualified NET (3 times) CSIR JRF, UGC JRF, CSIR lectureship and GATE (two times). Sir I assure you that I will try my best to complete the course work requirement with good grades if you would give me a chance to repeat the year. I shall be highly obliged to you.

Thanking you,

Sincerely yours,

Sompal Singh
(Sompal Singh)

Enrollment - 17919011

Date of Birth = 20/5/1986

*Forwarded
P.N. Agrawal
22/6/18*

*Sanjay Singh
Member, UMC*

*N Suk
25/6/18*

*Branch Dept. of other
university - technology - member
date 25/6/18*

RID

ADE

*(N) valid
25/06/18*

*Recommendation
of DRC attached
(P/A)
Recd. 13/07/18*

*As per appeals process as notified
the recommendation of DRC/CRC
should have been attached on my
Student with low CGPA be allowed.*

02.07.2018
Associate Dean
Academic Affairs-Evaluation

9

गणित विभाग
DEPARTMENT OF MATHEMATICS
भारतीय प्रौद्योगिक संस्थान
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
रूडकी ROORKEE

Academic Section
I.I.T. Roorkee
Diary No. 1947
Dated 6/7/18

NO.M/ 324/DC-5(DRC)

Dated: - July 24, 2018
06

Minutes of DRC Meeting

Minutes of DRC meeting held on July 05, 2018 at 4.00 p.m. in the Department Committee room, regarding mercy appeal of Mr. Sompal Singh R/S following were Present:

1. Prof. P.N. Agarwal (Chairman)
2. Prof. P. Bera
3. Prof. Maheshanand
4. Prof. Madhu Jain

Agenda Items -

1. Minutes of the last meeting were confirmed.
2. The mercy appeal of Mr. Sompal Singh may be considered for continuation of programme based on the medical grounds of his father and himself.

P.N. Agarwal
(P.N. Agrawal)
Chairman, DRC

Copy to:

1. Dean Academics Affairs for his information please
2. Head of the Department Mathematics for his information please
3. All Faculty Members by Mail
4. Mr. Vishesh Kumar Tanwar (CRC)
5. Faculty folder

To.

Asstt. Registrar (Evaluation)

Sir,
I have secured Grade point
8, 8, 7 and 4 (Final element)
As per attached letter I desire
to reappear in Final element
Method to improve my grasp

Thank you

Forwarded
V.K. Singh
(Superior)

Forwarded
P.N. Agrawal
6/7/18

Yours truly
Suresh Kumar

Director of Information & Public
Affairs
Indian Institute of Technology Roorkee
Roorkee-247 667

hky

INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

1. Name of the Research Scholar SARVESH KUMAR
2. Enrollment no. 17919010
3. Session 2017-18 4. Semester (Autumn/Spring) 2018
5. Department / Centre (1) Mathematics (2)
(where Enrolled) (Where working)
6. Status (Full time/ Part time, sponsored) Full Time
7. Title of seminar
8. Course credit 2 9. Grade obtained
10. Date on which seminar was delivered July 6, 2018
11. Proficiency in English (Satisfactory/Unsatisfactory)
12. A course on communication skill is required yes / no

It is recommended that one month extension be granted due to a narrow margin in the CGPA to clear the Exam. of Finite Element Methods.

(External expert)

(Internal expert)

(Supervisor)

Date:

Signature of Chairman SRC

Signature of Head of the Department

Note: this proforma is to be filled to send the grade in seminar

Dated
17/07/2018

To
The Dean of Academic
affair, IIT, Roorkee

Subject:- Regarding Consideration of my Noc from 26/03/2018.

Respected Sir,

I Raj Kumar Mishra applied for Noc in SRIC office dated 26/03/2018 to Convert my SRF position into Phd programme. I received the approved copy of Noc vide application No. IITR/SRIC/10678 with reference to the application No. mentioned and a copy attached with this application, along with the approval from SRIC office that the Noc is effective from 26/03/2018, kindly Consider my Noc effective from 26/03/2018

I will be very much thankful for
Your kind Consideration.

Recommended, pl.

Ashish
17/7/18
(Ashish Mishra)
PI & Prof MIED

Obediently Yours
Raj Kumar Mishra
SRF, MIED

P. K. Mishra
17/07/2018

भारतीय प्रौद्योगिकी संस्थान रुड़की
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
प्रायोजित शोध एवं औद्योगिक परामर्श कार्यालय
SPONSORED RESEARCH & INDUSTRIAL CONSULTANCY OFFICE

सं०आईआईटीआर/सिक/ /आई-26(डीएई)एमआईडी
No. IITR/SRIC/902 /I-26(DAE)MID

दिनांक : जुलाई , 2018
Dated : July 17 , 2018

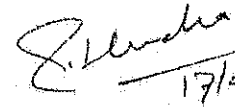
Shri Dileep Kumar Toppo
Asstt. Registrar (Admission)
IIT Roorkee

Subject : Effective date of No objection Certificate to Shri Raj Kumar Mishra, JRF, MIED

Ref. : This office's NOC No. IITR/SRIC/194/I-26(DAE)MID dated 25.04.2018

Kindly refer to your e-mail dated 16.07.2018 relating to the above subject.

With reference to above referred NOC, I am directed to apprise you that the effective date of No Objection Certificate issued to Shri Raj Kumar Mishra, JRF, MIED is **26.03.2018**.


17/07/2018

सहायक कुलसचिव (सिक-प्रशासन)
Asstt. Registrar (SRIC-Admn.)

भारतीय प्रौद्योगिकी संस्थान रुड़की
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
प्रायोजित शोध एवं औद्योगिक परामर्श कार्यालय
SPONSORED RESEARCH & INDUSTRIAL CONSULTANCY OFFICE

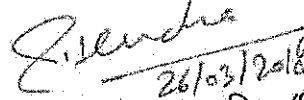
सं0आईआईटीआर/स्रिक/ /आई-26(डीएई)एमआईडी
No. IITR/SRIC/ 144 /I-26(DAE)MID

दिनांक : अप्रैल , 2018
Dated : April 25 , 2018

NO OBJECTION CERTIFICATE

In view of his application dated 26.03.2018 and on the recommendation of the PI, this is to certify that Shri Raj Kumar Mishra has been working in the Mech. & Ind. Engg. Department w.e.f. 06.11.2017 as SRF under research scheme entitled "**Experiments in Design Fire Environment Facility Relevant to NPPs**".

The Institute has no objection to allow Shri Raj Kumar Mishra for pursuing Ph.D. programme at IIT Roorkee as Research Scholar under the project category, if he is selected for the same. As per our record the duration of the project is upto 31.03.2019.


26/03/2018

सहायक कुलसचिव (स्रिक-प्रशासन)
Asstt. Registrar (SRIC-Admn.)

The Dean of Academic
UT, Rochester
through HOJ MIED

Subject:- Regarding admission to Ph.D Programme from SRF

Respected Sir,

This is to request you that myself Raj Kumar Mishra - Currently working under research project entitled "Experiments in design fire environment facility relevant to NPLs" sponsored by Department of Atomic Energy as a SRF under the guidance of Dr. Akhilesh Gupta Prof. (MLED). Further the duration of the project is upto 31/3/2019 and is likely to be extended.

kindly Convert my SRF position to
P.D programme. I will be very much thankful
for your kind Consideration.

with kind regard
Raj Kumar Mishra
SRF, MED

Proj. No. DAE-973-MED

17. 12. 1912

DATE

26 | 03 | 2018

Recommended

Alm

26/3/18

अवकाश / Retirement
 डी० आर० सी० / DRC
 एम० एफ० आई० डी० सी० / M & F.I.D.
 आई० आई० डी० सी० / I.I. Reserve

F2d

7/12/12

26/2/18

Head M. S. I. E. O.

POSTGRADUATE ADMISSION OFFICE
INDIAN INSTITUTE OF TECHNOLOGY / ORKEE

List of candidates applied for Direct Admission to Ph.D programme for Autumn Semester 2018-19 under project category

S.N o.	Candidate's Name	Deptt	Project code	GATE/ NET	Tenure of Project from the date of registration	Supervisor	Remarks	Admission Approved/ Not Approved
1.	SILVI LIRIL DHIRAJKUMAR	CHD	DAE-1028-CHD	YES	1 YEAR 7 MONTHS	PROF. SUMANA GHOSH		Approved
2.	SHOBHIT CHATURVEDI	ARD	DAE-1161-APD	YES	2 YEAR 8 MONTHS	PROF. E. RAJASEKAR		Approved
3.	RAJ KUMAR MISHRA	MIED	DAE-973-MID	NO	Project End Date 31.03.2019	PROF. AKHILESH GUPTA	As Project tenure is less than 1 year and offer can not be made	Not approved

At 15/11/18

Jt. Registrar, Academics

07.05.2018

Assoc. Dean, Admissions

07.05.2018

Dean of Academic Affairs

The Agenda was then taken up:

- Item No. 72.1: To confirm the minutes of the 71st meeting of the Senate held on 28.12.2017.**

Minutes of the 71st meeting of the Senate held on 28.12.2017 and circulated vide e-mail dated 31.01.2018 were confirmed.

- Item No. 72.2: To report on the actions taken to implement the decisions of the Senate taken in its 71st meeting held on 28.12.2017.**

The Senate noted the actions taken on the said minutes with a correction in item No. 71.17 as - 'revised proposal is awaited'.

- Item No. 72.3: To consider the following:**

- 1.Registration of a Project Fellow in Ph.D. programme**
- 2.Institute assistantship to Project Fellow after completion of project duration**

The Senate approved the recommendations with a minor change in item No. 2(a) that for a Project Fellow registered under Ph.D. programme, the total duration of Project Fellowship and Institute Assistantship shall not be more than 05 years from the date of registration in the Ph.D. programme.

- Item No. 72.4: To consider the limit on number of research scholars to be supervised by a faculty.**

The Senate approved the proposal.


- Item No. 72.5 : To adopt the admission criteria and selection guidelines for Prime Minister's Research Fellows (PMRF) as proposed by the National Steering Committee of PMRF.**

The Senate approved the proposal.

- Item No. 72.6: To consider seat matrix for Ph.D. admissions with Institute Assistantship and under Prime Minister's Research Fellowship (PMRF) for the academic year 2018-2019.**

The Senate approved the proposal as given in Appendix 'A'.

- 4 -


17 APR 2018

Item No. 72.3: To consider the following:

1. Registration of a Project Fellow in Ph.D. programme
2. Institute assistantship to Project Fellow after completion of project duration

IRC in its 19th meeting held on February 16, 2018 recommended as follows:

1. Registration of a Project Fellow in PhD Programme

a. Project fellows may be allowed to join PhD programme subject to:

- (i) Total duration of the project is at least 2 years.
- (ii) At least one year is left in the project at the time of registration.

b. The student can register for PhD programme in between the dates of registration. The student has to register for course work in the next semester, if sufficient time is not left for registering in the courses at the time of PhD registration.

2. Institute Assistantship after completion of project duration:

a) On recommendation of the SRC and completion of project funding, the project fellow already registered under PhD programme can get institute assistantship for a maximum period of 3 years, subject to the condition that the total duration of project fellowship and institute assistantship shall not be more than 5 years from the date of registration in PhD programme.

b) Such a change shall be considered as over and above case i.e. this will not be counted in the calculation of institute assistantships with respect to category/faculty/ department.

The recommendations are placed for the consideration and approval of the Senate.

सन्दर्भ
Reference

भा०प्रौ०सं०/IITR/संख्या/No.....

टिप्पणियाँ एवं आदेश
Notes and Order

Date: 17-07-2018

Sub: Admission to Ph.D. Programme for Mr. Raj Kumar Mishra, SRF, MIED.

We are in receipt of application dated 17th July 2018 from Mr. Raj Kumar Mishra, SRF, MIED for considering his case for admission to Ph.D. Programme. The said application is duly recommended by the PI, MIED.

(original copy is enclosed at F-1).

While going through the file, it is observed that previously the said candidate had submitted his application to Dean (SRIC) on 26th March 2018 for NOC. However, his case was not approved for Direct Admission to Ph.D. programme for Autumn Semester 2018-19 under project category on account of project tenure being less than 1 year and offer cannot be made.

(copy is enclosed at F-2).

The Senate in its meeting 22nd March 2018 has approved the registration of a Project Fellow in Ph.D. Programme subject to:

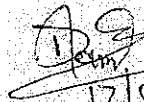
- The duration of the project is atleast 2 years.
- At least one year left in the project at the time of registration.

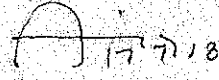
(copy of the Senate approval is enclosed at F-3)

In this connection, it is submitted that:

- Mr. Raj Kumar Mishra joined the project on 06th November 2017 in MIED. The project started in September 2016 and will be expiring on 31st March 2019.
- He has submitted NOC from SRIC Office wherein NOC is effective from 26th March 2018 (copy enclosed at F-4).
- The date of registration for Ph.D. programme was 6th July 2018 for Autumn Semester 2018-19 (F-2)

Submitted for kind order please.


17/07/18
Assistant Registrar (Admission)


→ JR (Academics)

AD (Adm)

the date of registration may be considered effective from 26 March 2018 (i.e.) the date of candidate's application. Submitted for approval.

Plu
17.7.18

Discussed with Director & approved. may be considered after placing the case before IRE.
N. V. V.
17/07/18

To

The Director

L.T. Roorkee

Uttarakhand - 247667

Appendix 'E'
Item No. Senate/74.17

Sub: - Regarding Request for "Mercy Appeal" for continue my Ph.D. Program

Respected Sir,

It is stated that I am Meenakshi Ph.D. research scholar at Centre of Nanotechnology under the supervision of Dr. Kaushik Pal. My Enrollment ID is 17906004 (Spring Semester).

Sir, I have already written an application for "mercy appeal" in the favour of Head of Department of Centre of Nanotechnology but I don't know whether my application has reached or not to the Dean of Academic. That's why I am writing this application directly to the director. I am enclosing photocopy of that application with this application.

Sir, I am appealing for "Mercy" in front of you for continue my Ph.D. program because I am in the stage between "No pass" and "No Fail" because My CGPA is 6.33 which is less than 7 according to the institute rule I couldn't continue my Ph.D. Program. Detail of my marks listed below.

Subject Name	Subject Coded	Grade Obtained	Grade Point
1. Structural Analysis of Nanomaterial	NTN-601	D+	5
2. Physics of Nanomaterial	NTN-604	B	8
3. Surface Engineering	NTN-608	C	6
4. Seminar	NTN-700	C	6

Sir, I don't know I deserve mercy chance or not. But I am trying to justify all reasons for mercy. These are listed below

Definition of Hard-work:-

When a student get good score all credit goes to his/her teachers but when a student got less marks everybody gives statement that "Not work hard" that's why she got less grade. I don't know what definition of hard work is

- 1) I came regular in lab in time.
- 2) I attend all classes and lecture seriously.
- 3) I scored well in Mid-Term examination.
- 4) My behavior and attitude is outstanding.
- 5) I am Gold Medalist of 2015 batch of M.Tech (Nano Science & Technology) from Kurukshetra University.
- 6) I got DST-INSPIRE fellowship after 2 years of my marriage.
- 7) I am not financial dependent or burden on Institute, department and individual because I am Inspire fellow which is sponsored by DST.
- 8) I had been living outside the campus for last 6 months nevertheless I never break my punctuality.
- 9) I have 15 months old baby after he sleeps; I study whole night for getting good score in the examination to become a doctor.

✓
ADE/ADC/ADA

(H. V. Rana)
Dean Academic Affairs

10) Sir, If Married women is not hardworking I don't think there is anybody in this world is hard worker.

No Provision of Revaluation:-

After I saw all these things, I decided for Revaluation of my Answer sheet. I wrote a revaluation application in favor of "Dean of Academic" and I went to HOD for forwarding application, but he said that there is no provision of revaluation in the institution rule book because you have seen your answer sheets and signed it. But I have not seen my third subject answer sheet and not signed it nevertheless my grade sent to academic.

Overall grade send to the academic department by the faculty so description of the grade in particular subject is not in academic department. Description of grade should be known to student for the transparency of the result.

Sir, There is rule of reappear for failed student in the Institution that means if student failed in course work they can reappear in the examination. But In my case there is no provision of reappear just "mercy appeal" is last option remaining for me. So I request you please accept my mercy appeal and give me another chance to prove myself.

Request to Honorable Director Sir:-

Overall, from here I will lose everything my degree, my fellowship, my carrier and my time which never return back. That means I will go in loss from every side. What Should I do I don't know? I am seeing that my future in the darkness where there is no hope.

Sir, I don't know what I deserve mercy, sympathy or Justice. But I request honorable director sir please give me a chance to prove myself that I am not burden on Institution and department instead of I am valuable assets of Institution. So again I request you with closed hand give me a mercy chance to prove myself.

- 1) "Mercy Appeal" is only last option remaining for saving my carrier.
- 2) Save my "DST-INSPIRE" fellowship because I don't have any other opportunity and chance to get this fellowship again.
- 3) I request you please justice with me in any circumstances. And give me a chance to continue my Ph.D. program.
- 4) I also request you to change my supervisor and department for the betterment of my education.
- 5) Save my future and carrier, you are my last hope for my Justice. I hope you will do best for me and hoping for favorable response.

Yours Truly

Date: - 18-Jul-2018

Meenakshi

Ph.D. Research Scholar.

Enrollment Id. 17906004

Centre of Nanotechnology

Mob: - 9992046784

Email Id.:- Kaushikmeenakshi15@gmail.com

The Head of Department
Center of Nanotechnology
I.I.T. Roorkee
Uttarakhand - 247667

Sub: Request for "Mercy Appeal" for completing my course work.

Respected Sir,

It is stated that I am Meenakshi DST inspire fellow and research scholar at the Centre of Nanotechnology under the supervision of Dr. Kaushik Pal. My Enrollment ID is 17906004 (Spring Semester).

So, I have taken the following four courses during the spring semester of 2017-18 and my CGPA is 6.33

Subject Name	Subject Code	Grade Obtained	Grade Point
1. Structural Analysis of Nanomaterial	NTN-601	D+	5
2. Physics of Nanomaterial	NTN-604	B	8
3. Surface Engineering	NTN-608	C	6
4. Seminar	NTN-700	C	6

So I request you to kindly give me another chance so that I can study harder to score CGPA that above to continue my Ph.D. program. I hope you will do best for me and hoping for favorable response.

Yours Truly,

Meenakshi

Ph.D. Research Scholar,

Enrollment Id. 17906004

Centre of Nanotechnology

Mob: 9992046784

Email Id.: Kaushikmeenakshi5@gmail.com

Prof. Kaushik Pal, Please do the needful

[Signature]
The Head of Deptt.
Center of Nanotechnology
I.I.T. Roorkee
Uttarakhand - 247667

DATE: 10/1/18

10/1/2018

To,

The Dean Academic Affairs,
IIT Roorkee.

Date: 18.07.2018

Through: H.O.D. Mathematics

Subject: Continuation of Ph.D. program and registration of
credits beyond permissible limit.

Sir,

With due respect, I Akshay Kumar Yadav (Enrollment No. 17919016) want to say that due to health problem, I could not studied properly in 1st semester. So, I have not secured the minimum CGPA required.

In 1st semester I have secured 5 SGPA.

I ensure you, that I will secure more than 7 CGPA if I have given an opportunity.

So, please allow me to continue my Ph.D. program and for registration of credits beyond permissible limit.

I shall be highly obliged to you for your kind action.

Yours sincerely,

AKSHAY KUMAR YADAV

Mobile: 8171387970, 7007092548

To
DRC chair person.

N. Suke
18/7/18
(Signature
H.O.D. Mathematics)

To Prof. S.P. Yadav
Chairman: SRC

Please give SRC view on this application
- samy 18/7/18

Chairman/Chair Person
DRC.

I know the problem with the scholar.
He may be allowed to register. But
his supervisor should also be changed.
He can not improve with the present
supervisor.

18/07/2018

I can't
supervise him

To Dr. A.K. Gupta, Sub-
Please give your view
this application and return
of possible get views of
complete SRC
- samy 18/7/18

Chairman/Chair Person
DRC.

Not Approved in view of IRC minutes

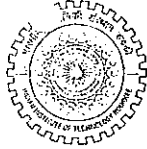
N Suk

23/7/18

IRC meeting

W/ Rastogi
23/07/18

पंजीकृत
REGISTERED



डा० अजय कुमार शर्मा
उप कुलसचिव (शैक्षणिक)

Dr. Ajay Kumar Sharma
Deputy Registrar (Academics)

भारतीय प्रौद्योगिकी संस्थान रुड़की
रुड़की-247 667 (उत्तराखण्ड), भारत
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
ROORKEE-247 667 (Uttarakhand), INDIA

Phone: 01332 285098, 285200 Fax: 01332 273560

E-mail: adap@iitr.ac.in, dracademic@iitr.ac.in

No. Accd./ 4668 /Ph.D.-01

Dated: 11th April, 2017.

The Registrar
National Institute of Technology Uttarakhand
Srinagar (Garhwal)

Sir,

As you are aware that the NIT Uttarakhand has MoU with IIT Roorkee regarding provision of switching from M.Tech. to Ph.D. programmes for the students of NIT Uttarakhand under Teacher Trainee Scheme. Keeping in view the problems being faced by the Research Scholars from NIT Uttarakhand & faculty guiding them from IIT Roorkee, an agenda regarding this was placed before the Senate of IIT Roorkee.

The Senate recommended that necessary provisions be made in the MoU for two years leave instead of one year so that the candidates under this scheme be given TWO years leave for doing the course work both for the M.Tech. and Ph.D., if required. In case, the desired modification is not feasible, the MoU be terminated.

It was also decided that the candidates already registered in IIT Roorkee and having CGPA ≥ 7.500 as below be given one time exception to switchover to Ph.D. programme:

1. Candidates, who have already completed M.Tech., be allowed to register as part-time Ph.D. candidate w.e.f. spring semester 2016-17 and the course work requirement be waived-off.
2. Candidates, who have completed one semester of M.Tech. dissertation, be allowed to register for Ph.D. as part-time candidate in autumn semester 2017 without any course work requirement after they finish their M.Tech.
3. Candidates, who are in M.Tech. 1st Year be allowed to switchover to Ph.D. without any course work requirement if the CGPA at the end of 1st Year is more than 8.50 else they will have to complete M.Tech. first and then only they can be admitted in Ph.D. programme.

In view of the above, it is requested to please look into the matter and send the modification in the MoU as suggested for approval from the Competent Authority at IIT Roorkee.

Yours faithfully,

Deputy Registrar (Academics)

o/c

Item No. 72.13: To consider waiving off of course work requirement for the candidates who have completed PG degree requirements (M.Tech./M.Arch./MURP) from IITR or any other IIT or IISc.

IRC in its 19th meeting held on February 16, 2018 recommended that a waiver in course work requirement can be given to a student if the student satisfies the following:

- a. Student has done M. Tech./M.Arch./MURP from IITs or IISc and has CGPA 8.5 or more.
- b. The student has started PhD within TWO years of the completion of M.Tech./M.Arch./MURP.

The waiver will be applicable if admission is sought within the relevant stream or discipline with respect to the post-graduate degree and is recommended by the SRC.

The recommendations are placed for the consideration and approval of the Senate.

Item No. 72.7: To consider the revision in the criteria for direct admission in Part-time Ph.D. programme.

The Senate approved the proposal.

Item No. 72.8: To consider and approve the seat matrix of PG programs for the academic year 2018-2019.

The Senate approved the proposal as given in Appendix 'B'.

Item No. 72.9: To consider to reinstate the Merit Cum Means (MCM) Scholarship from 2018-19.

The Senate approved the proposal.

Item No. 72.10: To consider the issuance of a certificate to the Ph.D. research scholars, if requested.

The Senate approved the proposal as given in Appendix 'C'.

Item No. 72.11: To consider the Online procedure for application and seat allocation (to candidates) related to M.Tech/M.Arch./MURP.

The Senate approved the proposal as given in Appendix 'D'.

Item No. 72.12: To consider the mercy request of Mr. Maheshbhai J. Vanajara, Enrolment No. 17920027, QIP Ph.D. Scholar in Mech. & Indl. Engg. Department to allow taking one additional subject in Spring Semester so as to fulfil course work CGPA requirement.

The Senate approved the proposal.

Item No. 72.13: To consider waiving off of course work requirement for the candidates who have completed PG degree requirements (M.Tech./M.Arch./MURP) from IITR or any other IIT or IISc.

The Senate approved the proposal. Further, decided that IISERs and IIMs be also considered for M.Sc. & MBA, respectively.



17 APR 2018

Item No. 72.3: To consider the following:

- 1. Registration of a Project Fellow in Ph.D. programme**
- 2. Institute assistantship to Project Fellow after completion of project duration**

IRC in its 19th meeting held on February 16, 2018 recommended as follows:

1. Registration of a Project Fellow in PhD Programme

a. Project fellows may be allowed to join PhD programme subject to:

- (i) Total duration of the project is at least 2 years.
- (ii) At least one year is left in the project at the time of registration.

b. The student can register for PhD programme in between the dates of registration. The student has to register for course work in the next semester, if sufficient time is not left for registering in the courses at the time of PhD registration.

2. Institute Assistantship after completion of project duration:

a) On recommendation of the SRC and completion of project funding, the project fellow already registered under PhD programme can get institute assistantship for a maximum period of 3 years, subject to the condition that the total duration of project fellowship and institute assistantship shall not be more than 5 years from the date of registration in PhD programme.

b) Such a change shall be considered as over and above case i.e. this will not be counted in the calculation of institute assistantships with respect to category/faculty/ department.

The recommendations are placed for the consideration and approval of the Senate.

The Agenda was then taken up:

- Item No. 72.1: To confirm the minutes of the 71st meeting of the Senate held on 28.12.2017.**

Minutes of the 71st meeting of the Senate held on 28.12.2017 and circulated vide e-mail dated 31.01.2018 were confirmed.

- Item No. 72.2: To report on the actions taken to implement the decisions of the Senate taken in its 71st meeting held on 28.12.2017.**

The Senate noted the actions taken on the said minutes with a correction in item No. 71.17 as - 'revised proposal is awaited'.

- Item No. 72.3: To consider the following:**
1.Registration of a Project Fellow in Ph.D. programme
2.Institute assistantship to Project Fellow after completion of project duration

The Senate approved the recommendations with a minor change in item No. 2(a) that for a Project Fellow registered under Ph.D. programme, the total duration of Project Fellowship and Institute Assistantship shall not be more than 05 years from the date of registration in the Ph.D. programme.

- Item No. 72.4: To consider the limit on number of research scholars to be supervised by a faculty.**


The Senate approved the proposal.

- Item No. 72.5 : To adopt the admission criteria and selection guidelines for Prime Minister's Research Fellows (PMRF) as proposed by the National Steering Committee of PMRF.**

The Senate approved the proposal.

- Item No. 72.6: To consider seat matrix for Ph.D. admissions with Institute Assistantship and under Prime Minister's Research Fellowship (PMRF) for the academic year 2018-2019.**

The Senate approved the proposal as given in Appendix 'A'.


17 APR 2019

Item No. 74.18: To consider the panel of Senate Nominees for the Selection Committee for the Group 'A' positions of Library (Librarian, Dy. Librarian, Assistant Librarian), Scientific and Computer Staff in IIC & ICC.

The selections to the post of Assistant Librarian and Scientific Officer is under process and a panel of Senate's Nominees is required for nominating the members on the Selection Committee for the said positions. In this context Statute 13(b)(iii) is reproduced below:

13(b) (iii) One expert, other than a Member of the Senate, nominated by the Senate

In view of the above, the panel of Senate's Nominees for the Group 'A' positions of Library (Librarian, Dy. Librarian, Assistant Librarian), as proposed by the Chairman Library Advisory Committee, Head, Institute Instrumentation Centre and Head, Institute Computer Centre, are placed at **Appendices 'A', 'B' & 'C'**, respectively.

The issue is placed for the consideration and approval of the Senate.

Appendix 'A'
Item No. Senate/74.18

Appendix-A

PANEL FOR SENATE NOMINEES ON THE SELECTION COMMITTEES

FOR THE POST OF LIBRARIAN, DEPUTY LIBRARIAN & ASSISTANT LIBRARIAN

SI. NO.	NAME & DESTINATION AND ADDRESS	PAY SCALE AND PERIOD OF EXPERIENCE	CONTACT NO.
1.	Prof. Uma Kanjilal Prof. & Head Faculty of Library and Information Science, IGNOU OFFICE ADD: Room No. 114, Block-F School of Social Sciences, Academic Block, IGNOU Campus, Maldan Garhi New Delhi-110068 RESIDENCE ADD: 1 Parijat (Director's Residence), Inter University Accelerator Centre (IUAC), Aruna Asaf Ali Marg, New Delhi-110067	PB-4, AGP-10,000/- Prof. Library and Information Science, IGNOU Since November 2003	Tel : 011-29572714 Mob: 09810488895 E-mail : ukaniilal@ignou.ac.in
2.	Shri. PVL. Reddy Chief Scientist & Head, Knowledge Resource Centre OFFICE ADD : Head, Knowledge Resource Centre CSIR-Central Electronics Engineering Research Institute, Pilani-333031, Rajasthan RESIDENCE ADD : D-30, CSIR-CEERI Colony, Pilani-333031, Rajasthan	PB-4, AGP-10,000/- Chief Scientist & Head, KRC Since February 2015	Tel : 01596-252241 (Office) Tel : 01596-243670 (Resi) Fax : 01596-242294 Mob : 09413111265 E-mail: pvlrceeri@gmail.com pvlr@ceeri.ernet.in
3.	Dr. Jagdish Arora Director, INFLIBNET Centre OFFICE ADD : Information & Library Network (INFLIBNET) Centre Infocity, Gandhinagar-382007, Gujarat RESIDENCE ADD : Director's Pent House INFLIBNET Campus Infocity, Gandhinagar-382007, Gujarat	Rs. 75,000/- (Fixed)+ Rs. 5,000/- Special Pay Director INFLIBNET Centre Since August 2007	Tel : 079-23268200 (Direct) 079-23268201 (PS) Mob : 09725051200 Email : director@inflibnet.ac.in Jarora42@gmail.com
4.	Prof. Ashu Shokeen Professor, Dept. of Library and Information Science OFFICE ADD : Dept. of Library and Information Science Kurukshetra University Kurukshetra, Haryana RESIDENCE ADD : F-6, Kurukshetra University Campus Kurukshetra, Haryana	PB-4, AGP-10,000/- Prof. in LIS Since October 2003	Tel : (O) 01662-238278 Tel : Resi. 01662-238939 Mob: 09416448939 E-mail: shokeen_ashu@rediffmail.com shokken_ashu@gmail.com

Appendix-B

NAME OF THE DEPARTMENT: INSTITUTE INSTRUMENTATION CENTRE

List of Senate's Nominees Proposed for Selection Committee at IIC for Group 'A' Non Teaching Staff:

SI. NO.	NAME & DESTINATION AND ADDRESS	PAY SCALE AND PERIOD OF EXPERIENCE	CONTACT NO.
1.	Dr. Sujeet Chaudhary Professor Office: Thin Film Lab, Dept. of Physics, IIT Delhi, Hauz Khas, New Delhi-110016	Professor, Thin Film Lab, Dept. of Physics, IIT Delhi, April, 11-till date. Associate Prof., Thin Film Lab, Dept. of Physics, IIT Delhi, Oct, 06-March, 11.	Tel: (O): (011)- 26591341 Tel: (R): (011)-26591794 Mob. Off.- 09423014560 Fax No. (011)-26581114 E-mail: sujeetc@physics.iitd.ac.in
2.	Dr. Annapoorni Subramanian Professor Office: Dept. of Physics and Astrophysics University of Delhi, Delhi	Lecturer in Dept. of Physics & Astrophysics, University of Delhi Mar 93 -Nov 96. Reader in Dept. of Physics & Astrophysics, University of Delhi, Nov 96 – April 2001. Reader in Dept. of Physics, University of Allahabad Apr 2001- Jan 2002 Reader in Dept. of Physics & Astrophysics, University of Delhi. Jan 2002-Nov 2006.	Tel: (O): (011)-27315329 Mob: Off. 09871521718 E-mail: annapoornis@yahoo.co.in
3.	Dr. P.K. Jain Scientist "F" & Team Leader Office: Head, Center for Carbon Materials, International Advanced, Reasearch Center for Powder Metallurgy & New Materials (ARCI), Department of Science & Technology (DST), Hyderabad-500005.	Scientist "F" & Team Leader- Center for Carbon Materials, International Advanced 1994-Till date	Tel: (O): (040)-24441469 Tel: (R): +91-8028543462 Mob: Off. 09849446456 Fax No: (040)-24442699 E-mail: pkjain@arci.res.in
4.	Dr. Chandra Prakash Scientist 'G' Associate Director Office: Head, Functional Materials Group, Solis State Physics Laboratory, DRDO, Delhi-110054.	Since Dec 2012, Scientist 'G' Associate Director Head, Functional Materials Group, Solis State Physics Laboratory, DRDO, Delhi-110054.	Tel: (O): (011)-23903402 Mob: Off. 9810825175 E-mail: cprakash2014@gmail.com
5.	Dr. Atul Khanna Professor Department of Physics Office: Department of Physics, Guru Nanak Dev University Amritsar-143005, Punjab	Professor, Department of Physics, Guru Nanak Dev University, Amritsar (from Jan. 2013 to Present). Associate Professor, Physics Department, Guru Nanak Dev University, Amritsar (from July 2009 to Jan . 2013).	Tel: (O): +91-183-225-8802 Mob: Off. 0183-222-1091 E-mail: atul.phy@gndu.ac.in

Appendix-C

NAME OF THE DEPARTMENT: INSTITUTE COMPUTER CENTRE

List of Senate's Nominees Proposed for Selection Committee at **ICC** for Group 'A' Non
Teaching Staff:

SI. NO.	NAME & DESTINATION AND ADDRESS	PAY SCALE AND PERIOD OF EXPERIENCE	CONTACT NO.
1.	Prof. Phalguni Gupta Director Office: Director, National Institute of Technical Teachers' Training & Research, Kolkata-700106	Specialization: Biometrics, Image Processing, Algorithms, Parallel Algorithms, On-line Algorithms Experience: On Leave from Department of CSE IIT Kanpur) Currently, he is Director of NITTTR, Kolkata	Tel: (O) +91-33-2337-0937 Fax: +91-33-2337-6331 E-mail: director@nitttrkol.ac.in pg.nitttr.kol@gmail.com pg@iitk.ac.in
2.	Prof. Shyam Gupta Professor Office: Computer Science & Engineering Department, IIT Delhi	Specialization: Graph Theory, Databases	Tel: (O) +91-011-26591289 Tel: (R) - +91-011-26591603 E-mail: skg@cse.iitd.ernet.in
3.	Dr. G. Athithan DS & DG (DRDO) Office: Distinguished Scientist & Director General (MED & CoS) DRDO Bhawan, Rajaji Marg, New Delhi-110004		Tel: (O) 011-23012505/23016281 Mob: 08826966288/09599944961 E-mail: dg@dgmedcos.hqrdm gathithan@hqr.drdo.in athithan.g@gmail.com
4.	Prof. T.V. Prabhakar Professor Office : Department of Computer Science & Engineering, IIT Kanpur, Kanpur-208016	Specialization: Computational Complexity, Randomized Algorithms, Logic	Tel: (O) +91-512-259-7618 E-mail: typ@iitk.ac.in

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



अनुपूरक कार्यसूची / SUPPLEMENTARY AGENDA

मुद्दासं०/ Item No.	विवरण / Particulars	पृष्ठ / Page(s)
74.19	प्रायोजित उम्मीदवारों के पीजी डिप्लोमा और एम.टेक कार्यक्रमों में अंशकालिक छात्रों के रूप में केवल पाठ्यक्रम की अवधि के लिए निवास आवश्यकता के साथ प्रवेश के प्रस्ताव पर विचार करना। To consider the proposal to admit Sponsored candidates in PG Diploma and M.Tech. Programs as part time students with residency requirement only for the duration of their course work.	170
74.20	स्प्रिंग सेमेस्टर (2018-2019) के लिए संस्थान असिस्टेंटशिप के साथ पी०एच०डी० में प्रवेश के लिए सीट मैट्रिक्स पर विचार करना। To consider the seat matrix for Ph.D. admissions with Institute Assistantship for the Spring semester (2018-2019).	171- 172
74.21	दीक्षान्त समारोह – 2018 के लिए छात्रवृत्तियों और पुरस्कारों पर सीनेट समिति की रिपोर्ट पर विचार करना। To consider the report of the Senate Committee on Scholarships and Prizes for Convocation – 2018.	173- 184
74.22	आरएण्डडी घटक वाले परामर्श परियोजना में काम कर रहे प्रोजेक्ट फेलो को पीएचडी अनुसंधान छात्र के रूप में प्रवेश पर विचार करना। To consider the admission of a Project Fellow working in a consultancy project having R&D component, as a Ph.D. research student.	185- 187
74.23	आनोरिस कौसा के नामों की सिफारिश करने के लिए सीनेट मानद उपाधि समिति (एसएचडीसी) के गठन करने के प्रस्ताव पर विचार करना।	188

	To consider the proposal for constituting a Senate Honorary Degree Committee (SHDC) for recommending names for Honoris Causa.	
74.24	<p>वार्षिक दीक्षान्त समारोह में मुख्य अतिथि की दो घंटे से अधिक की उपस्थिति की आवश्यकता न होने वाले माडल पर विचार करना।</p> <p>To consider a model of the Annual Convocation which does not require the presence of the Chief Guest for more than two hours.</p>	189-190
74.25	<p>उन छात्रों को अनंतिम पी0एच0डी0 उपाधि प्रदान करने की पुष्टि किया जाना, जिन्होंने विभिन्न पाठ्यक्रमों में 10 मई 2018 से अब तक उपाधि प्राप्त किए जाने की अर्हता प्राप्त की है।</p> <p>To ratify the award of provisional Ph.D. Degrees certificate to the students who have completed the requirements for the award of Ph.D. Degree in various disciplines w.e.f. 10th May 2018 to date.</p>	191-196

Item No. 74.19: To consider the proposal to admit Sponsored candidates in PG Diploma and M.Tech. Programs as part time students with residency requirement only for the duration of their course work.

The IAPC in its meeting held on 27th June 2018 discussed that Sponsored candidates for PG Diploma and M. Tech. programs often find it difficult to get leave from their organizations for the entire duration of the program, which is a mandatory requirement for admission of such candidates. In this regard, the IAPC has recommended the proposal to admit these candidates as part-time students with residency requirement only for the duration of their course work.

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

Item No.74.20: To consider the seat matrix for Ph.D. admissions with Institute Assistantship for the Spring semester (2018-2019).

The proposed seat matrix (**Appendix 'A'**) is submitted for the consideration and approval of the Senate.

Appendix 'A'
Item No. Senate/74.20

TABLE-1

Category wise vacancy i.e. 27% for OBC, 15% for SC, 7.5% for ST for admission to Ph.D program for Spring Semester of the session 2018-19 under Institute Assistantship

Deptt/ centre	Faculty Position (01.08.18)	Total seats @4.0 x no. of faculty	Total seats				Seats Filled					Vacancy				
			Gen	OBC	SC	ST	Gen	OBC	SC	ST	Total filled	Total vacancy	Gen	OBC	SC	ST
(Roorkee Campus)																
AHEC	5	20	10	5	3	2	9	5	3	1	18	2	1	0	0	1
Arch & Plng	18	72	37	19	11	5	26	12	10	0	48	24	11	7	1	5
Biotechnology	25	100	50	27	15	8	40	15	6	1	62	38	10	12	9	7
C-Trans	4	16	9	4	2	1	6	2	2	1	11	5	3	2	0	0
Dis. Mit. &Magnt	4	16	9	4	2	1	5	4	2	1	12	4	4	0	0	0
Nanotechnology	4	16	9	4	2	1	7	3	2	0	12	4	2	1	0	1
Chemical Engg	20	80	40	22	12	6	24	23	10	1	58	23	16	0	2	5
Chemistry	23	92	46	25	14	7	35	10	7	0	52	40	11	15	7	7
Civil Engg	44	176	89	48	26	13	59	40	23	5	127	49	30	8	3	8
Computer Sc. & Engg	11	44	22	12	7	3	18	6	3	0	27	17	4	6	4	3
Earth Sciences	22	88	44	24	13	7	30	7	5	2	44	44	14	17	8	5
Earthquake Engg	12	48	24	13	7	4	19	7	2	2	30	18	5	6	5	2
Electrical Engg	31	124	63	33	19	9	46	23	6	1	76	48	17	10	13	8
E&CE	19	76	38	21	11	6	22	15	4	0	41	35	16	6	7	6
Hum &Soc. Sciences	16	64	32	17	10	5	23	16	7	1	47	17	9	1	3	4
Hydrology	7	28	14	8	4	2	12	2	1	0	15	13	2	6	3	2
Inst. Instr. Centre	1	4	2	1	1	0	1	1	0	0	2	2	1	0	1	0
Management Studies	14	56	29	15	8	4	21	9	6	0	36	20	8	6	2	4
Mathematics	25	100	50	27	15	8	25	18	9	0	52	48	25	9	6	8
Mech&Indl Engg	42	168	85	45	25	13	61	34	19	5	119	49	24	11	6	8
Met & Mat Engg	21	84	42	23	13	6	26	17	13	1	57	27	16	6	0	5
Physics	32	128	64	35	19	10	43	21	6	1	71	57	21	14	13	9
WRD & M	5	20	10	5	3	2	10	4	3	1	18	3	1	1	0	1
	405	1620	818	437	242	123	568	294	149	24	1035	587	251	144	93	99
(Saharanpur Campus)	Total Seat @ 8 x no. of faculty															
Applied Sc. & Engg	4	32	16	9	5	2	17	5	1	0	23	11	1	4	4	2
Paper Technology	5	40	20	11	6	3	15	6	5	0	26	14	5	5	1	3
Polymer & Process Engg	12	96	49	26	14	7	29	13	12	0	54	42	20	13	2	7
	21	168	85	46	25	12	61	24	18	0	103	67	26	22	7	12

Item No.74.21: To consider the report of the Senate Committee on Scholarships and Prizes for Convocation - 2018.

The report **(Appendix 'A')** is submitted for the consideration and approval of the Senate.

(A) Nayar Excellence Award for Communication for Year 2017-2018:

A three round process was handled by a three member jury of Prof. Nagendra Kumar, Prof. Manoj Tripathy and Prof. Ashu Khanna .

Jury recommended following names for various prizes:

First prize of Rs 50,000	:	Mr. Rishabh, IV Year, MMED
Second Prize of Rs30,000	:	Ms. Neha.Arora, Biotechnology
Third Prize of Rs20,000	:	Ms. Renju K.K. IV Year, P & I

Since one girl is receiving the second prize, separate prize for a girl student is not recommended.

(B) Rural India Technology Based Upliftment (RITU) Excellence Award for Year 2017-18:

A three-member jury of Prof. S.P. Singh, Prof. V.C..Srivastava, and Prof. Gargi Singh invited applications and conducted interviews and recommended the name of Ms. Nimisha Gupta (14002065) B.Tech. IV Year, Chemical Engineering for RITU award of Rs. 15,000.

(C) Service Oriented Natural science Innovation & Application (SONIA) Excellence Award for Year 2017-18:

A three member jury of Prof. S.P. Singh, Prof. V.C. Srivastava, and Prof Gargi Singh invited applications and conducted interviews and recommended the name of Mr. Saksham Agarwal (14118085) B.Tech. IV Year, MMED for SONIA award of Rs. 15,000.

(D) Awards/ Medals for Convocation 2018

As per 72nd senate meeting, criterion for awards and medals for Annual Convocation were modified. Accordingly SCSP invited applications for various medals and awards. A six member jury of Prof. Rajat Agrawal, Prof. Himanshu Joshi, Prof B.S.S. Daniel, Prof. I.D. Singh, Prof. Gaurav Raheja, and Prof. Pranti Sarangi conducted interviews of various applicants. Recommendations of the jury are as follows:

S.No.	Medal/ Award	Criterion	Recommended Name
1	Director Gold Medal	To be awarded to the best all rounder amongst the B Tech/ B Arch/ IDD/ Int. MSc/ Int. M.Tech. students admitted through JEE. Minimum CGPA requirement is 9.0.	MULCHANDANI VISHAL HARESH Int. M Tech. GPT CGPA 9.184 Enrollment No. 13411013
2	The President of India Dr. Shankar Dayal Sharma Gold Medal	To be awarded to a graduating UG/PG student for excellent contribution in the field of Social Service. Minimum CGPA	SAKSHAM AGRAWAL B. Tech. (METALLURGICAL & MATERIALS)

		requirement is 8.0 .	CGPA 8.238 Enrollment No. 14118085
3	Dr. Jai Krishna Gold Medal	To be awarded amongst the B Tech/ B Arch/ IDD/ Int MSc/ IntM.Tech. students admitted through JEE for excellent contribution in the field of Youth leadership. Minimum CGPA requirement is 8.0.	SHARANPREET SINGH B.Tech. (CSE) CGPA 9.292 Enroll No. 14114053
4	Kedar Nath Agarwala I.S.E. Memorial Trophy and Cash Award of Rs. 5000/-	To be awarded to a graduating UG/PG student for excellent contribution in the field of Social Service. Minimum CGPA requirement is 8.0 .	PRAJWAL BHATT IntM.Tech. GT CGPA 8.266 Enroll No. 13410016
5	Om Bala Thapar Cash Prize of Rs. 12000/-	To be awarded to a graduating UG girl student on the basis of overall performance. Minimum CGPA requirement is 8.0.	YEOLA SHRUTIKA SUBHASH B. Tech. (METALLURGICAL & MATERIALS) CGPA 8.585 Enrollment No. 14118113
6	Laxmi Devi and Shri Banadri Das Cash prize of Rs. 5000/-	To be awarded to a graduating UG girl student on the basis of overall performance. Minimum CGPA requirement is 8.0.	MIMANSI AGARWAL B.Tech. (Chemical Engg.) CGPA 8.389 Enroll No. 14112055
7	Durga Award of Rs. 5000/-	To be awarded to a graduating UG girl student on the basis of overall performance. Minimum CGPA requirement is 8.0.	PATIL JANHAVI PRAKASH B.Tech. (Biotechnology) CGPA 8.111 Enroll No. 14111028
8	Smt. Kaushalya Arya Cash prize of Rs. 4000/-	To be awarded to a graduating UG girl student on the basis of overall performance. Minimum CGPA requirement is 8.0.	NIMISHA GUPTA B.Tech. (Chemical Engg.) CGPA 8.377 Enroll No. 14112065
9	Dr. A S Arya Cash prize of Rs. 4000/-	To be awarded to an all rounder amongst the B Tech/ B Arch/ IDD/ Int MSc/ IntM.Tech. students admitted through JEE. Minimum CGPA requirement is 8.0.	SUSHANT SHEKHAR Int M Tech (GT) CGPA 9.077 Enroll no. 13410024
10	Sri M A Rao Cash prize of Rs. 1000/-	To be awarded to an all rounder amongst the B Tech/ B Arch/ IDD/ Int MSc/ IntM.Tech. students admitted through JEE. Minimum CGPA requirement is 9.0.	VORA MEET HITESH B.Tech. (CSE) CGPA 9.45 Enrollment No. 14115138

11	Sarojini Naidu Cup	To be awarded amongst the B Tech/ B Arch/ IDD/ Int MSc/ IntM.Tech. students admitted through JEE for excellent contribution in the field of sports and academics. Minimum CGPA requirement is 8.0.	VASHI NEGI B.Tech. Biotech CGPA 9.005 Enroll No. 14111044
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Following awards are recommended on the basis of the criteria approved in the 72nd meeting of Senate:

12. **President Gold Medal** : To be awarded to the student having the highest CGPA amongst the B.Tech./ B.Arch./ IDD/ Int. MSc/ Int. M Tech. graduating students admitted through JEE :

Ayush Chauhan : B.Tech. (E & CE) Enroll No 14115027, CGPA 9.871

13. **Institute Silver Medal** : To be awarded to the student having the second highest CGPA amongst the B.Tech./ B.Arch./ IDD/ Int MSc/ Int M Tech graduating students admitted through JEE:

Suraj Gupta : B.Tech. (CSE) Enroll No. 14114065, CGPA 9.747

14. **Institute Bronze Medal** : To be awarded to the student having the third highest CGPA amongst the B.Tech./ B.Arch./ IDD/ Int MSc/ Int M Tech graduating students admitted through JEE:

Aditya Prakash : B.Tech (Electrical) Enroll No. 14115006, CGPA 9.718

15. **Department Gold Medals** :

To be awarded on the basis of highest CGPA: One Department Gold Medal for each UG programme and one Gold Medal for all PG programmes offered from one department/ centre. The eligibility to qualify for DGM is to get a CGPA of 9.0 or above.

13110027	SHRESTH JAISWAL*	2017-18	8	BACHELOR OF ARCHITECTURE
14111044	VASHI NEGI	2017-18	9.005	BACHELOR OF TECHNOLOGY (BIOTECHNOLOGY)
14112095	SPARSH JAIN	2017-18	9.617	BACHELOR OF TECHNOLOGY (CHEMICAL ENGINEERING)
14113070	NEERAJ KUMAR DWIVEDI	2017-18	9.337	BACHELOR OF TECHNOLOGY (CIVIL)
14114065	SURAJ GUPTA	2017-18	9.747	BACHELOR OF TECHNOLOGY (COMPUTER SCIENCE)
14115006	ADITYA PRAKASH	2017-18	9.718	BACHELOR OF TECHNOLOGY (ELECTRICAL)
14115027	AYUSH CHAUHAN	2017-18	9.871	BACHELOR OF TECHNOLOGY (ELECTRONICS & COMMUNICATION)

14117022	DIPANSHU MITTAL	2017-18	9.637	BACHELOR OF TECHNOLOGY (MECHANICAL)
14311017	S SHIVARAMAN*	2017-18	8.756	BACHELOR OF TECHNOLOGY (METALLURGICAL & MATERIALS)
14121015	AYUSH BHARDWAJ	2017-18	9.23	BACHELOR OF TECHNOLOGY (Polymer Science and Technology)
14214010	D.ROSHAN	2017-18	9.341	BACHELOR OF TECHNOLOGY (PRODUCTION & INDUSTRIAL)
13112098	SUDARSHAN SAHU	2017-18	9.227	INTEGRATED DUAL DEGREE - B.TECH (CHEMICAL) & M.Tech.(CAPPD)
13214007	CHAKRABORTY KUNAL KISHOLOY	2017-18	9.408	INTEGRATED DUAL DEGREE - B.TECH (PROCESS ENGG) & M.B.A.
13117075	VATSAL SANJAY	2017-18	9.096	INTEGRATED DUAL DEGREE - B.TECH (MECHANICAL) & M.Tech.(Thermal Engineering)
13410013	NIKHIL SINGH	2017-18	9.528	INTEGRATED M.TECH (GEOPHYSICAL TECHNOLOGY)
13410024	SUSHANT SHEKHAR	2017-18	9.077	INTEGRATED M.TECH (GEOLOGICAL TECHNOLOGY)
13312009	KIRNESH NANDAN	2017-18	9.107	INTEGRATED M.Sc. (APPLIED MATHEMATICS)

* These students are not eligible for Department Gold medal as their CGPA is less than 9.0.

16. **Best Project Award:** To be awarded on the recommendation of the department. The award carries a cash prize of Rs20000/- subject to each team member gets a minimum of Rs5000/-.

A. Department: Electrical Engineering

Title of project: Deep Learning for Medical Image Analysis.

Team Members: Mr. Shubham Kumar

Faculty Advisor: Prof. R.S. Anand and Prof. Nassir Navad

B. Department: Chemical Engineering

Title of project: Production of dimethyl ether using coal as feedstock.

Team Members: Kathole Shrishti Nitin, Jaju Kanhaiya, Nitesh Kumar, Brijesh Ishran, Kishan Tiwari

Faculty Advisor: Prof. B. Prasad.

C. Department: Mechanical and Industrial Engineering

Title of project: Design and Fabrication of 2-Stroke IC engine using double acting piston to increase power to weight ratio.

Team Members: Prabhupal Singh Seerha, Prashant Kumar.

Faculty Advisor: Prof. A.K. Das

- D. Department: Mechanical and Industrial Engineering
 Title of project: Experimental studies for determining feasibility of microwave drilling in metals.
 Team Members: D. Roshan, Manish Kumar Jangir, Siddhant Sharma, Ujjwal Gahlot.
 Faculty Advisor: Prof. A.K. Sharma
- E. Department: Civil Engineering
 Title of project: Design of Hydropower Project at the Downstream of Tehri
 Team Members: Shivang Bansal (14113106), Shubham kumar (14113108), Shubham Kumar (14113109), Soumya Nigotia (14113116), Sourav Tripathi (14113118)
 Faculty Advisor: Prof. Mahendra Singh, Prof CSP Ojha, Prof. M N Viladkar, Prof. Z. Ahmad, Prof. A. A. Kazmi, Prof. B. R. Gurjar, Prof. Rajat Rastogi, Prof. R .D. Garg, Prof. Mohd. Ashraf Iqbal, Prof. G. D. Ransinchung R.N., Prof. Rajib Chowdhury, Prof. O.P. Dubey
- F. Department: Computer Science Engineering
 Title of project: Signature authentication using EEG signals
 Team Members: Soumya Agrawal (14113115), Anusha Goel (14114015), Sumit Kumar Singh (14114063)
 Faculty Advisor: Prof. Partha Pratim Roy
- Title of project: Zero Shot Learning
 Team Members: Abhishek Jaisingh (14114002), Akashdeep Goel (14114004), Sanatan Sharma (14114049)
 Faculty Advisor: Prof. Biplab Banerjee
- G. Department: Electronics and Communication Engineering
 Team Members: Shubham Agarwal (14116063)
- H. Department: Bio-Technology Engineering
 Title of project: Binding studies of berberine with human telomeric g-quadruplex DNA.
 Team Members: Adhada Sri Teja
 Faculty Advisor: Prof. Ritu Barthwal
- I. Department: Metallurgy and Materials Engineering
 Title of project: Adhesive Wear behavior of novel austenite/ bainite steel
 Team Members: Shubam Vij (14118095), Yeola Shrutika Subhash (14118113)
 Faculty Advisor: Prof. Sourav Das

Title of project: Pulse electron deposition of zinc grapheme reinforced composite coatings on mild steel for improved corrosion resistance

Team Members: Anshul Kamboj (14118016), Luktuke Amey Avinash (14118045)

Faculty Advisor: Prof. G.P. Chowdhury

J. Department: Polymer Science and Technology **

K. Department: Architecture & Planning **

** Recommendations from these departments are awaited.

17. Following awards are recommended on the basis of CGPA/ departmental recommendations:

S.No	Name of Awards/Medals	Recipient
1.	Dr. A.N. Khosla Medal for the student obtaining highest C.G.P.A. in all B.Tech. Courses.	Ayush Chauhan B.Tech. (E & Ce) Enroll No 14115027, CGPA 9.871
2.	Smt. Shashi Krishna Medal for the student obtaining highest C.G.P.A. all B.Tech./B.Arch. courses.	
3.	Prof C L Toshniwal Award in Civil Engineering of Rs10,000/- To be awarded to a student of B.Tech. Civil Engineering who obtains highest marks in the compulsory courses of Environmental Engineering. Tie will be broken on the basis of overall CGPA.	Nikhil Kumar, Enrollment Number:14112064, CGPA: 9.284
4.	Sri M.A. Rao Cash Prize of Rs. 1000/- for the student standing second in order of merit in B.Tech. (Civil Engg.) Final Year.	
5.	Vinay Krishna Cash Prize of Rs. 5,000/- for a student of B.Tech., Civil Engg. final year who obtained second highest CGPA.	
6.	Prof. (Mrs.) Renu Bhargava Cash Award for Excellence in Environmental Engineering of Rs. 11,000/- to a girl student obtaining highest Marks/Grade in compulsory Environmental Engineering subjects in B.Tech. (Civil Engineering and securing overall CGPA 8.0 or above after final year.	Deepali Chauhan, Enrollment Number :- 14113040, CGPA:8.781
7.	Smt. Kailash Devi Goyal W/o Sri Kanhaiyalal Goyal of Firozabad Memorial Cash Prize of Rs. 5000/- for the student obtaining highest CGPA in B.Tech.(Elect.) final year.	Aditya Prakash : B.Tech (Electrical) Enroll No. 14115006, CGPA 9.718
8.	Prem Prakash Gupta Medal for the student obtaining highest C.G.P.A. in B.Tech. (Chemical) final year.	Sparsh Jain Enroll No. 14112095

9.	PremPrakash Gupta Cash Prize of Rs. 5000/- for the student obtaining highest C.G.P.A. in B.Tech.(Chemical) final year.	CGPA 9.617
10.	"AsthaMukul Dixit Prize" of Rs. 5,100/- for the best Engineering Project in Final year of B.Tech. Chemical Engg	KatholeShrishtiNitin, JajuKanhaiya, Nitesh Kumar, BrijeshIshran, KishanTiwari
11.	Everest Award of Excellence Rs. 10,000/- for the student who obtains highest CGPA in B.Arch. Final Year.	ShresthJaiswal Enroll No 13110027 CGPA 8.0
12.	Architect Yash Pal Gupta Award of Excellence of Rs. 10,000/- for a graduating student of B.Arch.	
13.	MadhusudanDayalMithal Medal for obtaining highest C.G.P.A. in B.Tech. (Civil).	Neeraj Kumar Dwivedi, Enroll No. 14113070 CGPA 9.337
14.	RaiBahadurSohanLal Bhatia Medal for obtaining highest C.G.P.A. in B.Tech.(Civil)	
15.	PrabhakarSwarup Civil Engineering Award of Rs. 10000/- to a student of B.Tech Civil IV year who obtained highest CGPA in B.Tech Civil IV year.	
16.	Shri Shiv NandanSwaroop and Avadh Narayan Bhatnagar Cash Prize of Rs. 5000/- to a student of B.Tech. Civil Final Year Batch topper	
17.	G.P. Bagchi Metallurgical & Materials Engineering Cash Prize of Rs. 5000/- for highest CGPA to Final Year student of Metallurgical & Materials.	S Shivaraman Enroll No. 14311017 CGPA 8.756
18.	Mrs. Leila Saxena Memorial Cash Award of Rs. 5000/- for the student who obtains highest CGPA in B.Tech. Metallurgical & Materials Final Year.	
19.	Dr. G. Pande Medal for the girl student for standing first amongst the girl students in all B. Tech./B. Arch. Courses.	Aishwarya Mittal, B.Tech. Electrical Engineering, Enroll No. 14115008, CGPA 9.473
20.	Col. Bajpai Cash Prize of Rs. 5000/- for the girl student obtaining highest CGPA amongst girls students in undergraduate Programmes.	
21.	Smt. Rama Devi Krishna Bhatnagar Cash Prize of Rs. 10000/- for the girl student amongst girl students in all Branches undergraduate Programmes.	Aishwarya Mittal, B.Tech. Electrical Engineering, Enroll No. 14115008, CGPA 9.473
22.	Air Cmdr Shyam Chand Mehra Scholarship of Rs. 10,000/- to a girl student of B.Tech 4 th year for obtaining highest CGPA in B.Tech. Electrical Engg.	
23.	Prof. Ranvir Singh Shastry Cash Prize of Rs. 6000/- to a girl student B.Tech. Final Year Who obtains 2 nd highest CGPA.	SOUMYA AGRAWAL, B.Tech. CSE, Enroll No. 14113115, CGPA 9.217

24.	Brig. Harish Chandra Cash Prize of Rs. 1000/- for the B. Tech., Civil Engg. Final year student on the basis of the best Design (Project).	ShivangBansal (14113106), Shubham Kumar (14113108), Shubham Kumar (14113109),
25.	Tara Chand Kanti Devi Cash Prize of Rs. 2500/- to the best student doing best design project in B. Tech. (Civil).	SoumyaNigotia (14113116), SouravTripathi (14113118)

M.Tech./M.Arch./M.U.R.P.M.Phil./M.Tech(ES)/M.Sc.

Department Gold Medals for obtaining highest CGPA in the department/ centre

S.No.	Enroll.No.	Name	cgpa	Prog. Name
1	16610030	SumanaGhosh	10	M.Sc.(Biotechnology)
2	16548011	Manoj Prasad Patel	9.886	M.Tech. (Water Resources Development)
3	16617002	AnirbanSaha	9.808	M.Sc.(Economics)
4	16611005	DikshaSaklani	9.803	M.Sc.(Chemistry)
5	16552006	IshitaBhatnagar	9.765	M.Tech. (Disaster Mitigation And Management)
6	16512007	Divyakshi Aeron	9.735	M.Tech. (Alternate Hydro Energy Systems)
7	16515008	Kavisha Dang	9.647	M.Tech. Chemical (Industrial Pollution Abatement)
8	16537011	Mst. Shamsad Mahmuda Fatima	9.571	M.Tech. (Hydrology-Ground Water)
9	16530020	Shivam Jain	9.559	M.Tech. Elect. (System And Control)
10	15541019	Subhamoy Pal	9.559	M.Tech. Mech.&Ind. (Thermal Engineering)
11	16525008	PrakashMokha	9.529	M.Tech. Earthquake (Soil Dynamics)
12	16535015	HimanshuMakkar	9.529	M.Tech. (Computer Science & Engineering)
13	16533003	GautamSoni	9.418	M.Tech. E &Ce (R.F. And Microwave Engineering)
14	16524023	Ravendra Singh	9.412	M.Tech. Civil (Transportation Engineering)
15	16555003	DakuriRamakanth	9.338	M.Tech. (Packaging Technology)
16	16616011	KhushbooGoyal	9.273	M.Sc.(Mathematics)
17	16551006	Garima Jain	9.229	M.Tech. (Nanotechnology)
18	16810004	Aayush Sharma	9.224	Master Of Business Administration
19	16615003	Aman Gupta	9.171	M.Sc.(Physics)
20	16612007	NirajRai	9.146	M.Sc.(Applied Geology)
21	16511009	InalaSowjanya	9.132	Master Of Urban And Rural Planning
22	16549002	PalakSondhi	9.103	M.Tech. (Advanced Methods Of Chemical Analysis)
23	16546005	QaseemHaider	9.015	M.Tech. (Pulp & Paper)
24	16544005	Deepak Kumar**	8.941	M.Tech. (Industrial Metallurgy)
25	16556003	AyushiAgarwal**	8.857	M.Tech. (Bioprocess Engineering)
26	16554004	Aravind P N**	8.471	M.Tech. (Infrastructure Systems)
27	16550008	MdAtif **	8.303	M.Tech. (Solid State Electronic Materials)

** These students are not eligible for Department Gold Medal as ther CGPA is less than 9.0.

28. Kathpalia Award of Rs. 5000/- for the dissertation in M. Tech. (Environment Engg.) (Civil) in the area of Environment Aspects. ***

29. Kathpalia Award of Rs. 5000/- for the dissertation in M. Tech. (Environment Engg.) (WRD) in the area of Environment Aspects. ***

*** Recommendations are awaited.

S.No.	Award/ Medal/ Prize	Recipient
30.	Tara Chand Kanti Devi Cash Prizes of Rs. 3000/- to the best student of M.Tech. (Civil).	Ravendra Singh, M.Tech. Civil (Transportation Engineering), Enroll No. 16524023, CGPA : 9.412
31.	Dr. Jai Krishna Medal for obtaining highest CGPA in all M.Tech. Courses.	Manoj Prasad Patel, Enrol. No. 16548011, M.Tech. (Water Resources Development), CGPA: 9.886
32.	Laxmi Devi and ShriBanadri Das Cash Prize of Rs. 5000/- for the best student with excellence in academic amongst all the student in M.Tech. Engg. /M.Arch. Courses.	
33.	N. Khosla Medal for obtaining highest CGPA in M.Tech. WRD courses in various specializations in WRD.	
34.	Dr. P.S. Nigam- Nirmala Cash Prize of Rs.1000/- for the best project in M.Tech. WRD	
35.	Tara Chand Kanti Devi Cash Prizes of Rs. 2000/- to the best student of M.Tech. Civil (Geotech)	Rishab Bhardwaj, Enroll No. 16521018, CGPA: 9.235
36.	The Indian Service of Engineers Cash Prize of Rs. 2000/- for standing first in class in Earthquake Engg. "Structural Dynamics"	ShivamHuriya, Enrollment No. 16526020, CGPA: 9.457
37.	The Indian Service of Engineers Cash Prize of Rs. 2000/- for standing first in class in "Soil Dynamics"	Prakash Mokha, Enrol. No. 16525008, CGPA: 9.529
38.	Amba Prasad – Kalawati Memorial Cash Prize of Rs. 5000/- to a student for obtaining highest CGPA in M.Tech. (Geomatics)	Ranveer , Enroll No. 15520013 CGPA 8.829
39.	Uma Goyal W/O Sri UdayShankerGoyal Memorial Cash Prize of Rs. 2500/- for obtaining highest CGPA in M.Tech. (Electrical Engg.) final year	Shivam Jain, Enrol. No. 16530020, M.Tech. Elect. (System And Control), CGPA: 9.559
40.	Sri KanahiyaLalGoyal F/O Sri UdayShankerGoyal Cash Prize of Rs. 2500/- for obtaining highest CGPA in M.Tech. (E&C) final year.	Gautam Soni, Enrol. No. 1653303, M.Tech. E&Ce (R.F. & Microwave Engineering), CGPA: 9.418
41.	Goyal Cash Prize of Rs. 1500/- for obtaining highest CGPA in M. Tech.(CSE).	HimanshuMakkar, Enrol. No. 16535015, CGPA: 9.529
42.	Puran Mal Gupta Medal for obtaining highest CGPA in Courses M. Tech. (Hydrology)	Mst. Shamsad Mahmuda Fatima, Enrol. No. 16537011, CGPA: 9.571
43.	Bihar Hydro Awards of Rs. 5000/- for a candidate obtaining highest CGPA in M. Tech. (AHES) final Year.	Divyakshi Aeron, Enrol No. 16512007, CGPA: 9.735
44.	Meenakshi Power Award of Rs. 20,000/- for best passing out female student of M.Tech. (AHES)	

45.	Electro steel Award Cash Prize of Rs. 10,000/- for M.Tech. (Alternate Hydro Energy Systems), II year Dissertation	
46.	Electro steel Award Cash Prize of Rs. 10,000/- for M.Tech. (Environment Management of Rivers and Lakes), II year best Dissertation	Mr. Stephano Mambuye Alphayo (Enrol No. 16513010)
47.	Chhattisgarh State Power Generation Corporation Hydro Awards of Rs. 10,000/- to M.Tech. (AHES) II-year student for Securing highest CGPA in II year and not awarded any other award of same or higher amount.	Saroj Man Tamrakar, Enroll No. 16512017, CGPA: 9.206
48.	Dr. A.N. Khosla Medal for obtaining highest CGPA in M.Sc./M. Tech. (Science) Courses.	Sumana Ghosh, Enrol. No. 16610030,
49.	Smt. Sushilavati Khosla Medal for the girl student obtaining highest CGPA in M.Sc./M.Tech. (Science) courses.	M.Sc.(Biotechnology), CGPA: 10
50.	G. Pande Medal for the girl student for obtaining highest CGPA in M.Sc. final year Examination	
51.	Dr. Hari G. Garg Cash Prize of Rs. 5000/- for obtaining highest CGPA in M.Sc. Chemistry Final Year.	Diksha Saklani, Enrol No. 16611005, CGPA: 9.803
52.	Amba Prasad – Kalawati Memorial Cash Prize of Rs. 5000/- to a student for obtaining highest CGPA in M.Tech. (Geomatics).	Ranveer, Enroll. No. 15520013, CGPA :8.83
53.	Shri Ravi Mohan Mangal Cash Prize of Rs. 25,000/- to a student of M.Tech. (Infrastructure Systems) of center for Transportation Systems (CTRANS) on the basis of highest CGPA in M.Tech. (Infrastructure Systems)	Aravind P N, Enrol. No. 16554004, CGPA: 8.471
54.	Sunita Bahadur Memorial Gold Medal to a student of M.Tech (Transportation Engineering) of Civil Engineering Department on based on highest CGPA in M.Tech. (Transportation Engineering).	Ravendra Singh, Enrol. No. 16524023, CGPA: 9.412
55.	Chhattisgarh State Power Generation Corporation Hydro Awards of Rs. 10,000/- to M.Tech. (EMRL) II year student for Securing highest CGPA in II year and not awarded any other award of same or higher amount.	Rajeev Rajan Rathour, Enrol No. 16513007, CGPA 9.394
56.	Meenakshi Power Award of Rs. 20,000/- for best passing out female student of M.Tech.(EMRL)	Maansi Suresh Shah, Enrol. No. 16513006, CGPA: 8.364
57.	Prof C L Toshniwal Environmental Engineering Award of Rs10,000/- to be awarded to a student of M.Tech. Civil Engg (Specialization in Environmental Engineering) on the basis of highest CGPA.	Aman Tiwari, Enrol. No. 16519002, CGPA: 9.145

Item No.74.22: To consider the admission of a Project Fellow working in a consultancy project having R&D component, as a Ph.D. research student.

The IRC in its 21st meeting held on 16.07.2018 discussed the above-mentioned issue in the light of Senate resolution 64.3 (**Appendix 'A'**), and discussion held in the 69th Senate (item No. 69.13, **Appendix 'B'**). The IRC recommended the following:

- (a) NOC shall be acquired from the sponsoring agency through SRIC office regarding:
 - (i) Research component in the consultancy project.
 - (ii) Involvement of a project fellow who will work on an R&D component in the consultancy project. The assistantship of the project fellow will be purely from the consultancy project.
 - (iii) Utilization of the research output by the project fellow and PI for the purpose of publications and submission of thesis.
 - (iv) Need of a 'Non-Disclosure Agreement' (NDA) between PI and sponsoring agency, if any.
- (b) On the recommendation of the PI, the SRIC office will issue an NOC to the candidate for enrolling in the Ph.D. program.
- (c) There should be sufficient funds to support the project fellow, other manpower, material and consumables required for the research work for the whole duration of the PhD program other than consultancy expenses, institute overhead charges, PI remuneration etc. Thus, the funding may be at least Rs. 70 lacs.
- (d) At the time of enrollment in the Ph.D. program, the time left in the project should not be less than 3 years and six months.
- (e) Institute assistantship shall not be made available to the candidate after the duration of the project.

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

to complete this requirement by 30th September 2016. The T grade be converted to actual grade (AP/AF) once the tour is organized.

It was also decided that this has to be completed before MTE of the next semester.

Item No.64.2: To receive a report on the actions taken to implement the decisions taken by the Senate in its 63rd meeting held on 11.01.2016.

The Senate noted the actions taken on the resolutions of the 63rd meeting held on 11.01.2016. The issue of constitution of Oral Defence Committee was again raised by a member. After due discussion it was decided that there will be no change in the constitution of Oral Defence Committee as mentioned in the Ph.D. Ordinances and Regulations.

Item No. 64.3: To consider the proposal of admitting Consultancy Project Fellows in Ph.D. programme

Considered the proposal of admitting Consultancy Project Fellows in Ph.D. programme as recommended by the IRC and decided that fellows selected in a Consultancy Project shall not be admitted in the Ph.D. programme directly. However, they can take admission in Ph.D. programme, only if selected in regular selection alongwith MHRD candidates.

Further, it was reiterated that Project Fellows selected in Sponsored Projects by the extended selection committee (having two more members from the department) can be admitted in the Ph.D. programme subject to satisfying the conditions notified earlier.

Item No. 64.4: To consider the request of Mr. Sanjeev Manhas, Faculty-in-Charge, TIEDS regarding provisions of study break for approval and incorporation in Academic rules and regulations for students' having start-ups companies incubation in TIEDS centre.

Considered the recommendations of the IRC on the proposal of Faculty-in-Charge, TIEDS regarding provisions of study break for students having start-ups companies incubation in TIEDS Centre and decided that no study break shall be given to any research scholar as there will be conflict of interests of student and supervisor.

Item No. 69.9: To consider the decision taken vide Senate Item No. 68.10 with respect to switch-over from M.Tech. to Ph.D. programme: To include centres running M.Tech. programme.

The Senate approved the proposal.

Item No. 69.10: To consider the Research Areas recommended by Four Departments.

The Senate approved the proposal.

Item No. 69.11: To consider for allowing B.Tech. + M.Tech. in Computer Science programme for eligibility of Ph.D. admission in the Department of Electronics & Communication Engineering.

The Senate approved the proposal.

Item No. 69.12: To consider the proposal of increasing the duration for candidacy in Ph.D. programme.

The Senate approved the proposal.

Item No. 69.13: To consider the admission of Project Fellows, working in a consultancy project having R&D component as a Ph.D. research scholar.

Considered and decided that the issue be referred back to IRC to examine the issues related to NOC, quantum of fund, research component in the project, tenure of the project etc. and submit its comprehensive recommendation to the Senate for consideration.

Item No. 69.14: To consider re-constitution of the Evaluation Committee for CSIR and UGC fellows who enroll themselves as Ph.D. candidate for upgradation from JRF to SRF.

The Senate did not accept the proposal.

Item No. 69.15: To consider provision of rolling advertisement for admitting Ph.D. candidates under national funding schemes other than ITR Assistantship and procedure thereafter.

The Senate approved the proposal. Further, it was decided that the Academic Office will come out with a rolling



Item No.74.23: To consider the proposal for constituting a Senate Honorary Degree Committee (SHDC) for recommending names for Honoris Causa.

It is proposed that a Senate Honorary Degree Committee (SHDC) be constituted as follows:

- (i) Director - Chair
- (ii) Deputy Director
- (iii) Dean, Academic Affairs - Convener
- (iv) One more Dean nominated by the Director, for a period of two years
- (v) Three Professors not holding the positions of Dean or Head, for a period of two years (Senate nominees)
- (vi) Three Heads of Departments by rotation, for a period of one year

Convener, SHDC will invite nominations for Honoris Causa from the Heads of academic departments and centers. The Heads will, in turn, seek nominations from their colleagues. The nominations received will be discussed in the DAC/CAC and the list of nominations approved will be submitted to the SHDC for consideration. Names can also be recommended by the members of the SHDC.

A sub-committee of the SHDC will be constituted as follows:

- (i) Dean, Academic Affairs - Convener
- (ii) One of the three Senate nominees
- (iii) One of the three Heads

This sub-committee will do due diligence on the names received and collect all the required data. Wherever required, the sub-committee will seek assistance from the department/individual which/who has submitted the nomination. This sub-committee will present its work before the SHDC which will take a call on the names to be recommended to the Board of Governors, for further processing. Some suitable names may not be recommended in a year because the recommended list in a year cannot be very long. Hence all nominations received will be eligible for consideration for two more years. The recommended names will be reported to the Senate.

This is submitted for the consideration and approval of the Senate

Item No.74.24: To consider a model of the Annual Convocation which does not require the presence of the Chief Guest for more than two hours.

In recent times, the number of degree recipients in the Convocation has crossed 1500. As a result, a single session Convocation is not desirable. It needs more than 4 hours time, hence is inconvenient to both the Chief Guest, as well as the other attendees i.e. students and faculty. In fact, in 2016, because of this long duration, the Chief Guest could not stay till the end of the function.

One alternative is a two-session Convocation which not only reduces the duration of each session but also brings in a welcome feature by letting the parents attend the function.

However, a two-session Convocation means we need two Chief Guests. This implies that if in one of the sessions the Chief Guest is a very high dignitary, say, for example the President of India, the students and parents attending the other session will feel let down. In other words, this model prevents us from inviting a very high dignitary as the Chief Guest for any one of the two sessions.

This year alone, at least four of our sister institutions have already had ~~a very~~ a very high dignitary as the Chief Guest of the Convocation. On such occasions, to reduce the need for the Chief Guest to stay for more than two hours, the Convocation function is being divided into two parts. The Chief Guest attends only the first part which is of at most two hours duration and consists of everything as usual except that the distribution of degrees to the students does not take place. The distribution of degrees takes place in the second part which happens after the Chief Guest has left.

The second part can be done in more than one way. One possibility is that it is split into two sessions - one for UGs and the other for PGs. The splitting allows the parents to attend the session in which degree will be distributed to their ward by the Director and also keeps the duration of each session small. Another possibility is that this second part is decentralized and is done in the respective departments. Each department can have its own Chief Guest for this part, thus some well placed alumni of the department can be invited as the Chief Guest. Departments

which do not have adequate space can do their function in the LHC.

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

Item No.74.25: To ratify the award of provisional Ph.D. Degree certificates to the students who have completed the requirements for the award of Ph.D. Degree in various disciplines w.e.f. 10th May 2018 to date.

The list is presented in **Appendix 'A'**.

IV Senate Approved PDC List:

Appendix -

S.No	Name	Deptt.	Topic	Supervisor	Examiner (For./Ind.)	PDC Date
1	Mr. Bhaskar De	AR	OPTIMIZATION OF ORIENTATION AND CANYON ASPECT RATIO FOR A CITY IN WARM HUMID CLIMATE	Dr. Mahua Mukherjee	Prof. Wong Nyuk Hien, Singapore Prof. N. K. Bansal, New Delhi	28.05.18
2	Mr. Siva Rama Krishna Madeti	AHEC	DEVELOPMENT OF ON-LINE MONITORING SYSTEM FOR A GRID CONNECTED SOLAR PHOTOVOLTAIC PLANT	Dr. S. N. Singh	Prof. Jan Kleissl, USA Dr. N. C. Sahoo, IIT Bhubaneswar	25.07.18
3	Mr. Hariom Sharma	ASE	SOLUTIONS OF CERTAIN NON-LINEAR PDES WITH APPLICA	Dr. Rajan Arora	Prof. Anjan Bisas, USA Prof. Vishnu Dutt Sharma, IIT Bombay Prof. L. P. Singh, BHU Varanasi	17.07.18
4	Mr. Vijay Kumar	BT	STRUCTURAL STUDIES OF SHIKIMATE AND FATTY ACID BIOSYNTHESIS PATHWAY'S ENZYMES	Dr. Pravindra Kumar	Prof. Christian Betzel, Humburg Dr. Sonika Bhatnagar, NSIT New Delhi Dr. Pawan Gupta, IMT Chandigarh	28.05.18
5	Ms. Savita Budania	BT	INVESTIGATING HUMAN L1 RETROTRANSPOSON ACTIVITY IN ORAL SQUAMOUS CELL CARCINOMA PATIENTS	Dr. P. K. Mandal Dr. R. Prasad	Prof. Haig H. Kazazian, USA Dr. R. Kulshreshtha, IIT Delhi Dr. Amit Dutt, Mumbai	04.06.18
6	Ms. Neha Singh	BT	XENOBIOTIC COMPOUND DEGRADATION AND THEIR EFFECTS ON IMPORTANT ENZYMES	Dr. Pravindra Kumar	Prof. Christian Betzel, Humburg Dr. Anushree Malik, IIT Delhi Dr. Amit Kumar, IIT Indore	18.06.18
192	Ms. Deepa Teotia	BT	MOLECULAR ANALYSIS OF CINNAMATE CoA-LIGASE FROM PHYTOALEXIN PRODUCING APPLE CELL CULTURES	Dr. Debabrata Sircar	Prof. Ludger Beerhues, Germany Dr. Javid Iqbal Mir, Srinagar	10.07.18
8	Ms. Anchal Sharma	BT	BIOPHYSICAL, BIOCHEMICAL AND STRUCTURAL CHARACTERIZATION OF DRUG TARGETS FROM BACTERIA	Dr. Pravindra Kumar	Prof. Christian Betzel, Humburg Dr. Ashwani K. Thakur, IIT Kanpur Dr. Samudrala Gourinath, JNU Delhi	19.07.18
9	Ms. Himani Maheshwari	CEDMM	OBJECT BASED EXPERT SYSTEM FOR ESTIMATION OF CARBON FOOTPRINT	Dr. Kamal Jain	Prof. Colin Arrowsmith, Australia Dr. Harish C. Karnatak, ISRO Dehradun Dr. Narayana Panigrahi, Karnataka	13.07.18
10	Mr. Vishal Kumar Sandhwar	CH	ELECTROCHEMICAL TREATMENT OF PETROCHEMICAL WASTEWATER	Dr. B. Prasad	Prof. Ramin Farnood, Canada Prof. Anil Kumar Saroha, IIT Delhi Prof. Kaustubha Mohanty, IIT Guwahati	09.07.18
11	Ms. Ayushi Verma	CH	BIOSORPTIVE REMOVAL OF HEAVY METALS USING SARGASSUM FILIPENDULA FROM WASTEWATER	Dr. C. B. Majumder Dr. (Late) Shashi Kumar	Prof. S. A. Sherif, USA Prof. S. K. Srivastava, IIT (BHU) Varanasi Prof. D. Ray, IIT Kharagpur	19.06.18
12	Mr. Gaikwad Mahendra Shivaji	CH	ADVANCE TREATMENT FOR REMOVAL OF CHROMIUM AND FLUORIDE FROM INDUSTRIAL WASTEWATER	Dr. C. B. Majumder	Prof. Krishna R. Reddy, USA Prof. Ashok K. Srivastava, IIT Delhi Dr. Rajesh Roshan Dash, IIT Bhubaneswar	09.07.18
13	Ms. Ankita Saini	CY	NAPHTHALIMIDE-BASED MATERIALS FOR ELECTRONIC AND BIOLOGICAL APPLICATIONS	Dr. K. R. Justin Thomas	Prof. Juozas Vidas Grazulevicius, Lithuania Prof. Parameswar K. Iyer, IIT Guwahati Prof. Rajneesh Misra, IIT Indore	13.07.18

14	Ms. Nivedita Chaudhri	CY	β -FUNCTIONALIZED CHLORINS AND PORPHYRINS: SYNTHESIS, SPECTRAL AND REDOX PROPERTIES	Dr. M. Sankar	Prof. F. D. Souza, USA Prof. S. P. Rath, IIT Kanpur Prof. A. K. Mishra, IIT Madras	18.05.18
15	Mr. Kamal Prakash	CY	FUNCTIONALIZED PORPHYRINS AND THEIR APPLICATION IN DSSC, ELECTROCATALYSIS AND ANION SENSING	Dr. M. Sankar	Prof. Takahiko Kojima, Japan Prof. M. Ravikanth, IIT Bombay Prof. Dillip Kumar Chand, IIT Madras	18.05.18
16	Ms. Surinder Pal Kaur	CY	COMPUTATIONAL STUDIES OF SELECTED GAS HYDRATES AND HYDRATE MELTS	Dr. Ramachandran C. N.	Prof. Slawomir J. Grabowski, Spain Dr. T. J. Dhillip Kumar, IIT Ropar	29.06.18
17	Ms. Pallavi Singh	CY	INORGANIC, ORGANIC/INORGANIC HYBRID MATERIALS FOR PHOTOVOLTAIC APPLICATION	Dr. Prasenjit Kar	Prof. Young Jong Kang, Korea Dr. Aswani Yella, IIT Bombay	25.07.18
18	Mr. V. Joseph	CY	CYANOCARBAZOLE-BASED ORGANIC MATERIALS FOR ELECTRONIC APPLICATIONS	Dr. K. R. Justin Thomas	Prof. Jun Yeob Lee, Korea Prof. Anil Kumar, IIT Bombay Dr. Satish A. Patil, IISc Bangalore	25.07.18
19	Mr. Sunil Kumar	CY	DITHIENOPYRROLE-BASED ORGANIC MATERIALS FOR PHOTOVOLTAICS	Dr. K. R. Justin Thomas	Prof. Hong-Cheu Lin, Taiwan Dr. P. Thilagar, IISc Bangalore Prof. Parameswar K. Iyer, IIT Guwahati	11.07.18
20	Ms. Poonam	CY	ENANTIOMERIC RESOLUTION OF RACEMIC PHARMACEUTICALS	Dr. Ravi Bhushan	Prof. J. Martens, Germany Prof. K. N. Singh, IIT BHU Varanasi Prof. Nand Kishor, IIT Bombay	09.07.18
21	Mr. Raeesah Muhammad	CY	INORGANIC-ORGANIC HYBRID NANOPOROUS MATERIALS FOR CARBON DIOXIDE CAPTURE	Dr. Paritosh Mohanty	Prof. Tewodros Asefa, USA Prof. A. K. Mishra, IIT Madras Prof. A. K. Mishra, IIT Bombay	25.07.18
22	Mr. Manish Pandey	CE	SCOUR AROUND BRIDGE PIER IN GRAVEL BED STREAMS	Dr. P. K. Sharma	Prof. Satish Giri, Netherlands Prof. Virender Kumar Sarda, NIT Hamirpur Dr. Rajesh Srivastava, IIT Kanpur	13.07.18
23	Mr. Umesh Kumar Singh	CE	INFLUENCE OF COHESION ON SEDIMENT TRANSPORT	Dr. Z. Ahmad Dr. Ashish Kumar	Prof. Stefano Pagliara, Italy Prof. Rajesh Srivastava, IIT Kanpur Prof. S. A. Ansari, AMU Aligarh	29.05.18
24	Mr. Manendra Singh	CE	SEISMIC RESPONSE OF SHALLOW METRO UNDER GROUND TUNNELS	Dr. M. N. Viladkar Dr. N.K. Samadhiya	Prof. Gopal SP Madabhushi, UK Prof. Ashish Juneja, IIT Mumbai	04.06.18
25	Mr. Sunil Khuntia	CE	ANALYSIS OF PLATE ANCHORS AND RETAINING WALLS SUPPORTING SOIL WITH SLOPING SURFACE	Dr. J. P. Sahoo	Prof. Abdul-Hamid Soubra, France Prof. G. R. Dodagoudar, IIT Madras Dr. Manash Chakraborty, IIT (BHU) Varanasi	25.07.18
26	Mr. Kuldeep	CE	TEXTURE BASED EXTRACTION OF ISLANDS AND FLOOD VULNERABILITY ASSESSMENT USING RS	Dr. R. DD. Garg Dr. P. K. Garg	Dr. Martin Kappas, Germany Prof. Onkar Dikshit, IIT Kanpur Dr. Anil Kumar, ISRO Dehradun	07.05.18
27	Mr. Khalid Muzamil Gani	CE	FATE AND REMOVAL OF PHTHALATES IN BIOLOGICAL WASTEWATER TREATMENT	Dr. A. A. Kazmi	Prof. F. Ali Mempon, UK Prof. M. M. Ghangrekar, IIT Kharagpur Prof. Mohammad Jawed, IIT Guwahati	07.05.18

28	Mr. Ajit Kumar Sahoo	ES	GENESIS OF GOLD MINERALIZATION IN HIRA-BUDDINI, HUTTI SCHIST BELT, KARNATAKA, INDIA	Dr. R. Krishnamurthi Dr. P. Sangurmath	Prof. Anne-Sylvie Andre-Mayer, France Prof. M. S. Pandian, Puducherry Prof. G. N. Jadhav, IIT Bombay	25.07.18
29	Ms. S. Neethu	ES	SLOPE STABILITY EVALUATION IN AND AROUND KODAIKANAL TOWN, TAMILNADU	Dr. R. Anbalagan	Prof. Rajinder Bhasin, Norway Dr. Pankaj Gupta, CSIR, New Delhi	25.07.18
30	Mr. Balendra Mouli Marrapu	EQ	GEOTECHNICAL HAZARD ASSESSMENT OF SOIL SLOPES IN HILLY REGION	Dr. Ravi Sankar Jakka	Prof. Hemanta Hazarika, Japan Prof. Deepankar Choudhury, IIT Bombay Prof. T. G. Sitharam, IISc Bangalore	15.05.18
31	Ms. Shermi C.	EQ	SEISMIC BEHAVIOUR AND RETROFITTING OF URM BUILDINGS	Dr. R. N. Dubey	Prof. Panagiotis G. Asteris, Greece Prof. Ravi Sinha, IIT Mumbai Prof. T. K. Datta, IIT Delhi	28.05.18
32	Mr. Shihabudheen KV	EE	MODELING AND CONTROL USING IMPROVED NEURO-FUZZY SYSTEMS	Dr. G. N. Pillai	Prof. Kazuo Kiguchio, Japan Prof. Chitralekha Bahanta, IIT Guwahati	06.06.18
33	Mr. Yarlagadda Srinivasa Rao	EE	POWER QUALITY IMPROVEMENT USING MODULAR D-STATCOM	Dr. M. K. Pathak	Prof. Bimal K. Bose, USA Prof. Praveen Kumar, IIT Guwahati Prof. Ranjit Mahanty, IIT (BHU) Varanasi	25.06.18
34	Mr. Vadthya Jagan	EE	INVESTIGATIONS ON ENHANCED-BOOST Z-SOURCE INVERTERS	Dr. Sharmili Das	Prof. Ned Mohan, USA Prof. Santanu Mishra, IIT Kanpur	13.07.18
35	Mr. Arun Balodi	EE	ANALYSIS OF MITRAL REGURGITATION USING ECHOCARDIOGRAPHIC IMAGES	Dr. M. L. Dewal Dr. R. S. Anand	Prof. Dinesh K. Pant, Australia Prof. Vikram M. Gadre, IIT Bombay	07.05.18
36	Ms. Savitesh Madhulika Sharma	ECE	MODELING OF MULTIGATE MULTIFIN FINFETS FOR HIGH FREQUENCY APPLICATIONS	Dr. S. Das Gupta Dr. M. V. Kartikeyan	Prof. Giovanni Ghione, Italy Prof. Amitava Das, IIT Madras	07.06.18
37	Mr. Anupam Kumar	ECE	INTERVAL TYPE-2 FUZZY LOGIC CONTROLLERS FOR ROBOT MANIPULATORS	Dr. Vijay Kumar	Prof. Joseph Olorunfemi Ojo, USA Prof. Jayanta Pal, IIT Bhubaneswar Prof. S. K. Nagar, IIT (BHU) Varanasi	26.07.18
38	Ms. Ruchi	ECE	VARIATION AWARE MEMORY DESIGN FOR LOW POWER APPLICATIONS	Dr. S. Das Gupta	Dr. Tony Tae-Hyoung Kim, Singapore Dr. Saurabh Lodha, IIT Bombay Prof. Madhu Mutyam, IIT Madras	11.05.18
39	Mr. Amarjit Kumar	ECE	RECONFIGURABLE MULTIBAND AND MULTIFUNCTIONAL RADIO-FREQUENCY INTEGRATED CIRCUITS	Dr. N. P. Pathak	Prof. Takashi Shimizu, Japan Dr. M. Jaleel Akhtar, IIT Kanpur Prof. V. Subramanian, IIT Madras	10.05.18
40	Ms. Deeksha Sharma	HSS	EXPLORING THE LINK AMONG EMOTIONAL INTELLIGENCE, LATERALITY AND REACTION TIME	Dr. Rachita Gulati Dr. Indiar Misra	Dr. Luca Tommasi, Italy Prof. Manas K. Mandal, IIT Kharagpur Prof. H. S. Asthana, IIT (BHU) Varanasi	19.06.18
41	Mr. Litan Kumar Ray	HY	CLIMATE CHANGE STUDIES OVER PARTS OF INDIA	Dr. N. K. Goel	Prof. Dev Niyogi, USA Prof. Chandranath Chatterjee, IIT Kharagpur Prof. Rjendra Singh, IIT Kharagpur	12.06.18
42	Ms. Bijoylaxmi Sarmah	DoMS	MODELLING AND MEASURING OF CUSTOMER PARTICIPATIVE SERVICE INNOVATION BEHAVIOR	Dr. Z. Rahman	Prof. Srikanth Beldona, USA Prof. L. Prakash Sai, IIT Madras Dr. Devashish Das Gupta, IIM Lucknow	28.05.18

43	Ms. Reenu Rani	MA	MATHEMATICAL MODELING OF RENEWABLE RESOURCE	Dr. Sunita Gakkhar	Prof. Jean Christophe Poggiale, France Prof. Arvind Kumar Misra, IIT (BHU) Varanasi Prof. Siddhartha P. Chakrabarty, IIT Guwahati	04.06.18
44	Ms. Rangoli Goyal	MA	NUMERICAL SIMULATION OF SOME PROBLEMS IN MECHANICS USING ADVANCED FE TECHNIQUES	Dr. Rama Bhargava Dr. Indra Vir Singh	Prof. Jahrul Alam, Canada Prof. Peeyush Chandra, Vadodara Prof. Amiya Kumar Pani, IIT Bombay	10.05.18
45	Ms. Priyanka Sangal	MA	GENERALIZED POSITIVITY TECHNIQUES APPLIED TO HYPERGEOMETRIC TYPE FUNCTIONS	Dr. A. Swaminathan	Prof. Nak Eun Cho, Korea Prof. V. Ravichandran, DU Delhi Prof. V. Vetrivel, IIT Madras	07.05.18
46	Mr. Ajay Kumar	MA	MATHEMATICAL MODELING OF PHASE CHANGE HEAT TRANSFER PROCESS IN BIOLOGICAL TISSUES	Dr. V. K. Katiyar Dr. Shirley Telles	Prof. Cecile Piret, USA Prof. Prawal Sinha, IIT Kanpur Prof. Jitendra Kumar, IIT Kharagpur	07.05.18
47	Mr. Chandan Pandey	MIE	SOME STUDIES ON THE EFFECT OF HEAT TREATMENT AND DIFFUSIBLE HYDROGEN ON P91 WELDS	Dr. M. M. Mahapatra Dr. Pradeep Kumar	Prof. R. D. Morales Dr. N. R. Mandal	17.07.18
48	Mr. Surya Kumar	MIE	THERMAL CONTACT CONDUCTANCE OF CONFORMING AND NON-CONFORMING CONTACTS	Dr. A. Tariq	Prof. Mohamed Gad-El-Hak, USA Dr. Deb Mukhopadhyay, BARC Mumbai Prof. K. Muralidhar, IIT Kanpur	16.05.18
49	Mr. Naveen Sharma	MIE	INVESTIGATION ON AEROTHERMAL CHARACTERISTICS OF SURFACE MOUNTED TURBULENCE PROMOTERS	Dr. A. Tariq Dr. Manish Mishra	Prof. Mohamed Gad-El-Hak, USA Prof. B. V. S. S. S. Prasad, IIT Madras Prof. P. K. Das, IIT Kharagpur	29.05.18
50	Mr. Ravinder Kumar	MIE	MICRO ELECTRIC DISCHARGE MACHINING OF DIFFICULT-TO-MACHINE MATERIALS	Dr. Inderdeep Singh	Prof. Hom Nath Dhakal, UK Prof. J. Ramkumar, IIT Kanpur Prof. Puneet Mahajan, IIT Delhi	09.07.18
51	Mr. Sisay Addis Filketu	MIE	ANALYZING JOB SATISFACTION BY QUALITY MANAGEMENT FOR ETHIOPIAN LEATHER INDUSTRY	Dr. Akshay Dvivedi Dr. Birhanu Beshah	Prof. M. Affan Badar, UAE Dr. Deepu Philip, IIT Kanpur Prof. S. G. Desmukh, ABV-IIITM Gwalior	13.07.18
52	Mr. Rajesh Kumar	MIE	EFFECT OF FUNCTIONALIZATION AND DEFECT ENGINEERING ON THE PROPERTIES OF h-BN/NANOCOMPOSITE	Dr. Avinash Parashar Dr. Pierre Mertiny	Prof. Adri Van Duin, USA Prof. Hitendra K. Malik, IIT Delhi	08.05.18
53	Mr. Sumit Ghosh	MME	THERMOMECHANICAL SIMULATION KINETICS TO DEVELOP HIGH STRENGTH IF AND MICROALLOYED STEELS	Dr. Suhrit Mula	Prof. Carl C. Koch, USA Prof. Sudipto Ghosh, IIT Kharagpur Prof. N. K. Mukhopadhyay, IIT (BHU) Varanasi	28.05.18
54	Mr. Kuldeep Kumar Saxena	MME	HOT DEFORMATION BEHAVIOR OF Zr-Nb ALLOYS	Dr. Vivek Pancholi Dr. G. P. Chaudhari	Prof. Maria Cecilia Poletti, Austria Dr. V. Subramanya Sarma, IIT Madras Prof. Satyam Suwas, IISc Bangalore	09.07.18
55	Mr. Ravindra Kumar	MME	SURFACE MODIFICATION OF A CASE HARDENABLE AISI 8620 STEEL USING TIG ARCING PROCESS	Dr. P. K. Ghosh	Prof. Lin Ye, Australia Dr. M. Shome, Jamshedpur	08.05.18
56	Mr. Rahul Saini	NT	NOVEL APPROACHES FOR PROCESSING WASTE PRINTED CIRCUIT BOARDS	Dr. R. K. Dutta	Prof. Juan A. Conesa, Spain Dr. T. Mishra, Jamshedpur	28.05.18

57	Mr. Tushar Bhardwaj	DPT	AUTONOMIC RESOURCE ALLOCATION FOR SERVICE-BASED AND PARALLEL CLOUD APPLICATIONS	Dr. S. C. Sharma	Dr. Maaruf Ali Smieeee, UK Prof. Binod K. Kanaujia, JNU Delhi Dr. Manoj Thakur, IIT Mandi	04.06.18
58	Mr. Deepak Kumar	PH	LIGHT-HEAVY-ION REACTION DYNAMICS IN MEDIUM MASS NUCLEI:STUDY OF MEDICAL ISOTOPE	Dr. Moumita Maiti	Prof. Christoph E. Dullmann, Germany Prof. P. K. Pujari, BARC Mumbai Prof. B. K. Nandi, IIT Bombay	25.07.18
59	Ms. Monalisha Dhibar	PH	STUDIES IN NUCLEAR STRUCTURE AND BIG BANG NUCLEOSYNTHESIS USING PROTON BEAMS	Dr. Anil K. Gourishetty Dr. Indranil Mazudar	Prof. Thomas B. Clegg, USA Prof. V. S. Bhasin, New Delhi Prof. Basanta K. Nayak, BARC Mumbai	10.05.18
60	Ms. Anto J.	WRDM	ANALYSIS OF DYNAMIC BEHAVIOR OF VARIABLE SPEED PUMP STORAGE UNITS UNDER CONVERTER FAULTS	Dr. Thanga Raj Chelliah	Prof. Joseph Olorunfemi Ojo, USA Dr. Suryanarayana Doolla, IIT Bombay	09.07.18
61	Mr. Sunil Kumar Dubey	WRDM	EFFECT OF PERIODICAL CO2 ENRICHMENT ON WHEATcv.PBW 343 THROUGH FIELD AND SIMULATION STUDY	Dr. S. K. Tripathi	Prof. Gerrit Hoogenboom, USA Dr. Ananta Vashisth, New Delhi Dr. Ram Niwas, Hisar	21.06.18
62	Mr. Kumar Amrit	WRDM	STUDY OF REGIONAL DROUGHT CHARACTERISTICS AND ENVIRONMENT	Dr. S. K. Mishra Dr. R. P. Pandey	Prof. Ronny Berndtsson, Sweden Prof. Eldho T. I., IIT Bombay Prof. U. C. Chaube, Indore	07.06.18