

# SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT

No: Dean (Acad.)/IAAC/549 /2022-23

Date: 17/07/2023

SVNIT

### The minutes of the 63<sup>rd</sup> meeting of the Institute Academic Advisory Committee (IAAC)

The aforesaid meeting was held on 7<sup>th</sup> July 2023, 10:30 am onwards in the Institute Conference room, first floor, Administrative Building. The following members attended the IAAC meeting.

Sr. No.	Name	Designation
1	Dr. Anupam Shukla	Director, Chairman
2	Dr. Pramod Mathur	Registrar
3	Dr. Ravi Kant	Dean (Students' Welfare)
4	Dr. U.D. Dalal	Dean (Alumni & Resources Generation) & In-charge Head, Department of Electronics Engineering
5	Dr. G.J. Joshi	Head, Department of Civil Engineering
. 6	Dr. M. A. Desai	Head, Department of Chemical Engineering
7	Dr. R.G. Mehta	Head, Department of Computer Science and Engineering
8	Dr. A. K. Panchal	Head, Department of Electrical Engineering
9	Dr. J. Banerjee	In-charge Head, Department of Mechanical Engineering
10	Dr. Jayesh M. Dhodiya	Head, Department of Mathematics and Humanities
11	Dr. S.K. Sahoo	Head, Department of Chemistry
12	Dr. Dr. D.R. Roy	Head, Department of Physics
13	Dr. H. R. Jariwala	Associate Dean (Academic)
14	Dr. R.K. Jana	Associate Dean (Academic)
15	Dr. N. D. Jariwala	Associate Dean (Research and Consultancy)
16	Dr. M.K. Rathod	Associate Dean (Research and Consultancy)
17	Dr. S.R. Patel	Associate Dean (Students' Welfare)
18	Dr. S.N. Shah	Associate Dean (Students' Welfare)
19	Dr. S.J. Patel	Faculty In-charge, Department of Artificial Intelligence
20	Dr. Urvashi Kaushal	Faculty In-charge, Department of Humanities & Social Sciences
21	Dr. M.A. Zaveri	Dean (Academic), Member-Secretary
Invitee(s)	1	
22	Shri Amit C. Patel	In-Charge Deputy Registrar (Academic)

The following members could not attend the meeting.

Sr. No.	Name	Designation
1	Dr. D.C. Jinwala	Dean (Research and Consultancy)
2	Dr. C.D. Modhera	Dean (Faculty Welfare)
3	Dr. V. L. Manekar	Dean (Planning and Development)
4	Dr. Sushil Kumar	Associate Dean (Faculty Welfare)
5	Dr. Y.D. Patil	Associate Dean (Planning and Development)
6	Dr. S.S. Arkatkar	Associate Dean (Planning and Development)
7	Dr. H.B. Mehta	Associate Dean (Research and Consultancy)
8	Dr. V.K. Patel	Associate Dean (Academic)
9	Dr. H.K. Dave	Associate Dean (Alumni & Resource Generation)
10	Dr. B. Dholakiya	Associate Dean (Alumni & Resource Generation)
11	Mr. Raghav Khandelwal	Students' General Secretary
12	Mr. Sarvesh Kumar	Academic Affairs Secretary (AAS)
13	Ms. Janavi Popat	Research Innovation Affairs Secretary

### **Items and Resolutions**

Item	Agenda Item	Remarks
No.		
Item	To discuss and adopt the revised Academic Calendar for the Academic	
63.1	Year 2023-24.	
Reso.	Revised Calendar Approved. (Annexure-I)	
63.1		
Item	To discuss the report submitted by the committee for revisions in	
63.2	admission to M.Tech. (Research and Sponsored Category) and Ph D	
	category conversion from the Academic year 2023-24.	
Reso.	The recommendations of the committee were accepted with following	
63.2	modifications:	
	(a) For M.Tech. (Research and Sponsored Category) was discussed and	
	suggested as under:	
	1) The minimum experience required for admission should be 2 years of	
	full-time work experience after graduation in a registered firm/	
	company / industry / educational or research institute / any	
	government department or government autonomous organizations	20 20
	2) Last minimum gross salary of the applicant should be Re 20000/ nor	
	month.	
	(b) Ph.D. Category conversion only first point of the recommendations	<i>Δ</i> Λ
	was accepted after discussion for inclusion in the existing rules which is	
	as follows.	
	Full time Project Staff Scholar may be allowed for conversion as Full	

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e e	time Institute Scholar as per eligibility criteria of the category to be	
	converted. GATE/NET is required for conversion to Full time Institute	
	Research Scholar. (Annexure-II)	10 a
Item	To consider MoUs signed with Indian Institute of Technology, Bhilai for	
63.3	academic, research collaboration and student exchange programmes and	
1	to create a shared pool of faculty resources between the two institutions.	2. A.S. 1
Reso.	The MoU between SVNIT and Indian Institute of Technology, Bhilai is	1 A
63.3	already signed for academic, research collaboration and student exchange	
	programmes and to create a shared pool of faculty resources between the	
	two institutions. It is resolved to forward the proposal of the joint Ph.D.	
	program for approval by the Senate starting from the year 2023-24. The	
	MoU copy is attached in. (Annexure-III)	
Item	To consider the recommendations of DAAC, Department of Chemical	
63.4	Engineering.	· · · · · · · · · · · · · · · · · · ·
	Admission Criteria for the Ph.D. Admission (Eligible Degree) (Reso. No.2	
	of the 105 <sup>th</sup> meeting of the DAAC held on $00/4/2023$ ).	
	The Ph.D. Degree Certificate should be changed (name of discipline to be	
	omitted) so as to include the interdisciplinary research. The candidates	and the second sec
	from discipline other than Chemical Engineering & allied branches should	2
	exhibit the research potential in the desired field of Chemical Engineering.	
2	Further upon changing the format, the degree allowed for the Ph.D.	
	admission in the Department of Chemical Engineering are as follows:	
	B.Tech./B.E./Equivalent and M.Tech./M.E./Equivalent in Chemical	2
	B Tech /B E /Equivalent and M Tech /M E /Equivalent in Mechanical	
	Engineering B Tech /B E /Equivalent and M Tech /M E /Equivalent in	4
	Civil Engineering B Tech /B E /Equivalent and M. Tech /M.E./Equivalent	*
4. / 	in Environmental Engineering B Tech /B E /Equivalent and	1 429 - 10 - 1
	M Tech /M F / Faujyalent in Fnergy Engineering Technology	
	B Tech /B E /Equivalent and M Tech /M E /Equivalent in Electronics	24
	Engineering B Tech /B E /Equivalent and M Tech /M.E./Equivalent in	17 T 1
	Electrical Engineering	
·	B Sc and M.Sc. (or integrated M.Sc.) with GATE/NET/CSIR Exam	na i so
	qualification B.Pharm and M.Pharm.	
Reso.	Admission Criteria for the Ph.D. Admission (Eligible Degree) was	
63.4	discussed and accepted except the following criteria, which will be discus	
	further	
	"B.Sc. and M.Sc. (or integrated M.Sc.) with GATE/NET/CSIR	
	Exam qualification B.Pharm and M.Pharm".	
	Also suggested that the Ph.D. Degree Certificate should be changed (name	
	of discipline to be omitted) as discussed in the item 63.10.	a a second
Item	To consider the enhancement of remuneration to the foreign	
63.5	examiner of the Ph.D. Thesis regarding.	
Reso.	It was discussed and proposed an enhancement in remuneration to the	· · · · · · · · · · · · · · · · · · ·
63.5	Foreign Examiner and Indian Examiner of the Ph.D. thesis reviewer	
	respectively from US \$ 200 to US \$ 300 for the Foreign Examiner and	
1. S.	Ks. 5000 to Ks. 10000/- for Indian Examiner and decided to forward the	
	same to Senate and Finance Commute approval. (Annexure-IV)	

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Item	To consider NPTEL, SWAYAM and other Massive Open Online Course	
63.6	(MOOC) courses to be approved for Semester-III of M.Tech. (CSE)	
	(resolution no. 1 of the DAAC meeting held on 12/06/2023)	
Reso.	The list of NPTEL, SWAYAM and other Massive Open Online Courses	
63.6	(MOOC) to be offered in Semester III of M.Tech. CSE is approved.	14
	(Annexure-V)	
Item	A request of B. Sai Sandeep (DS18EL007), working under the	Academic
63.7	supervision of Dr. H.G. Patel and Dr. K.D. Mistry for the category	Regulations
	conversion from the FIR to PEC (resolution no. 1 of the 71 <sup>st</sup> meeting of	for
	the DAAC held on 15/06/2023). The students have completed 3	Destanal
	semesters and also submitted 'No Objection Certificates' from the	Doctoral
	respective Employers with the recommendations. (Joined KPIT	Programme
	Technologies Ltd as Test Leader w.e.f 2/5/2023).	(July 2019)
Deso	Approved as por Academic Regulations 11.2 (1)	11.3 (d)
63 7	reproved as per Academic Regulations 11.3 (d)	
Itom	A request of Ma Swati Salthare (D14D0000)	
63.9	supervision of Dr. U.D. Data for submission of Dr. U.D. Data for submission of Dr.	Academic
05.0	(resolution 1 of the DAAC meeting hold on 14/(2002)	Regulations
	Swati Sakhare could not submit the compliance report for time C	for
	(6 months after receiving comment from Eventing) due time of course	Doctoral
	situations in her life such as domestic violence and secure her life	Programme
	studions in her me such as domestic violence and severe nearn issues.	(July 2019)
		125(a)
Reso.	A request of Ms. Swati Sakhare (D14EC006) working under the	12.5 (a)
63.8	supervision of Dr. U.D. Dalal for submission of compliance report was	
	approved.	
Item	To discuss about implementation of joint Ph.D. Programme with Indian	
63.9	Institute of Technology, Jammu.	
Reso.	Suggestions were requested from the HoDs and the members for	
63.9	implementation of joint Ph.D. programme and student exchange with IIT	e
	Jammu as well as IIT Gandhinagar as per MoU signed. (Annexure-VI)	21
Item	To discuss the format for PhD degree certificate and including the Minor	
63.10	Degree in existing B.Tech. Degree Certificate.	
Reso.	Format was approved as per Annexure-VII.	
63.10		
Item	Vocational Training / Professional Field Experience list received from	
63.11	the department for approval, if any.	C2
Reso.	Department of Mechanical Engineering has proposed the syllabus of	
63.11	Vocational Training and recommended for the approval of the Senate.	4. g.
	Other HoDs are also requested to propose such Vocational Training for	
	publishing on the institute web site as a part of NEP implementation.	
-	(Annexure-VIII)	
Item	10 discuss and modify the number of credits of the final semester -	
63.12	dissertation of M.Tech. programme in connection of NEP	
D	implementation for a total of 80 credits.	
Reso.	As the institute is implementing NEP 2020 from the academic year 2023-	
63.12	24 for UG and MSc programs, a similar implementation at MTech	
	requires to modify the number of credits of the final semester -	S
	dissertation of M.Tech. programme for a total of 80 credits. It was	
	suggested that the same point can be discussed at the department level	4

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11	and the modification in the credits can be proposed by the respective $DAAC$ for further action	
	Any other Item by Chair	
Itom	To consider and approved the sullabus of PH601/PH602 "Research	
63 13	Methodology for Science" as the Department of Physics course for Ph D	
05.15	students from the Academic Year 2023-24 (resolution 2 of the 43 <sup>rd</sup>	2
	DAAC meeting held on $4/7/2023$ 9 (Annexure-IX)	, es
Reso.	The syllabus of PH601/PH602 "Research Methodology for Science" was	
63.13	recommended for the approval of the Senate.	
Item	To consider the application received from Rahul V. Prajapati	Academic
63.14	(DS15CH002) working under the supervision of Dr. J.K. Parikh and	Regulations
	Arun M. Patel (DS15CH004) working under the supervision of Dr. S. R.	for
E	Patel preferably for 2 semester extension of the registration period for	Doctoral
	Ph.D. beyond seven and half years. (Reso. 1 of the 110 <sup>th</sup> meeting of the	Programme
	DAAC held on 05/7/23).	$(J_{\rm 1}J_{\rm 2})$
		(July 2019)
	As non Assistantia Develotion 115 (-) 1 Deve 2 - 64- 67th	11.5 (a)
Reso.	As per Academic Regulation, 11.5 (a) and Reso. 2 of the 57 <sup></sup> meeting of	~
63.14	IAAC held on 22/1/2022. They completed the seven years as per the	×
	institute rule and additional half-year duration (the extended duration for	- T
	the COVID reason). The request for the extension for duration of 6	
2	months for completing pre-synopsis and thesis submission is	
	recommended for Senate approval.	
Item	Regarding the conduction of the Supplementary Examination.	12 · +
63.15		-
Reso.	At present the supplementary examination is conducted twice in the year	·
63.15	for both ODD and EVEN semesters (i) in the month of July and (ii) in the	
	month of February.	12
	The above point is discussed and it is resolved that for the benefit of the	
- T.A.	students the supplementary examination should be conducted once for	
*	ODD and EVEN semesters respectively, that is, in the month of May and	
	July in the following manner: The ODD semester supplementary	
	examination may be conducted immediately in the next week after the	
	completion of EVEN semester examination in the month of May.	5 2 3 A
	Whereas the EVEN semester supplementary examination may be	
	conducted in the month of July one week before the beginning of the next	
	academic year.	
Item	Regarding detail syllabus of Second year of each programme for the new	×
63.16	scheme 2023-24 and the proposal of Minor and Honors programmes in	
1	various departments under NEP implementation.	
Reso.	It is suggested to HoDs for preparing the detail syllabus as for the Second	le f
63.16	year of each programme as per the new curriculum scheme 2023-24 and	
	the possible list of Specialization tracks. Minor and Honors programmes	
	that can be offered across various programmes with mutual discussion so	
	that the name of Specialization tracks. Minor and Honors programmes can	
a 0	be finalized with the list of subjects in the ensuing IAAC meeting	
Itom	Degarding the receivation implementation for Dh D Drogramme	
Item	Regarding the reservation implementation for the Programme	

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63.17	admiss	sion.		4		A. 1949-13			3	1	
Reso.	As pe	r the Mo	E guide	elines for	reserva	ation im	pleme	ntation	in Ph D	-	
63.17	progra	r Senate									
	approv	Ji Denate	1								
	The total intake will be decided by each department in the PhD										
	programme at the institute level and based on the percentage of										
	reserva										
_	distributed (Table 1). The category-wise preference for a selection of a										
	studen	17									
	admiss										
	be cha	anged in	a round	1-rohin m	2 2). III	or the r	y-wis	e prefere			
	admission (Table 2) The actogrammer for the next semester's Ph.D.										
	admitted students (Table 4) and vacant and (Table 5).										
$\times$	by each	intained									
	1 Cre										
	1. Cross mark all entries in the Category Preference Matrix which are										
	exhausted in the department and also										
	2. Cross mark entry that the faculty selected a student of a particular										
	category in the last semester's Ph.D. admission.										
	For example,										
	Table 2										
	Category Preference Matrix Faculty wise for current semester admission										
			Open	EWS	OB	C S	C	ST			
		Faculty	0	1	2		3	4			
		FI	1	2	3	4	1	1			
		F2	2	3	4	1	1	2			
	T-1-1- 2	F3	3	4	1	2	2	3			
	Table 3										
	Categor	ry Prefere	nce Mat	rix Facult	y wise fo	or next se	meste	er admiss	ion	e.	
			Open	EWS	OB	C S	C	ST			
		Faculty	- 1	2	3	4	ł	0			
	-	Fl	2	3	4	1		1			
	-	F2	3	4	1	2	2	2			
	l	F3	4	1	2	3	3	3			
			19								
h1a 1								11. <sup>15</sup> - 14			
umber	Numbe	1 1					,				
of	r of										
egular	PhD										
aculty embers	scholar s per	Total Intake	PWD	FIR							
in the	faculty	Intarte	/0			111.19					
partm	membe					•					

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EWS (1) 4

PWD

OBC (2)

120

PWD

10

Open (0)

12

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PWD

Z

PWD

SC (3)

PWD

ST (4)

%	40.5		10		27		15		75		100
	49		12	_	32		18		0	1	120
	47	2	11	1	30	2	17	1	0	0	120
Existing		2					1/	1	9	U	120
Vacant	47	2	11	1	20			100			0
				1	30	2	17	1	9	0	120

### Table 4

Existing												
Open		EWS		OBC		SC		ST		Total	Total	Tatal
FIR	Othere	FID	Others	FID	0.1		-	51		Total	Total	Total
TIX	Oulers	FIK	Others	FIR	Others	FIR	Others	FIR	Others	FIR	Others	
									0		Others	31
1												
	Existing Open FIR	Existing       Open       FIR       Others	Existing       Open     EWS       FIR     Others       FIR	Existing     EWS       Open     EWS       FIR     Others       FIR     0       Image: State S	Existing     Image: constraint of the state	ExistingImage: Constraint of the sector of the	Existing     Image: second secon	Existing     Image: Constraint of the state	Existing     Image: second secon	Existing     Image: second secon	Existing     Image: style st	Existing       Image: second sec

### Table 5

	Vacant												
	Open		EWS		OBC		SC		ST		Total	Total	Total
Faculty	FIR	Others	FIR	Others	FIR	Others	FIR	Others	FIR	Othere	EID	Othere	Total
F1	4	6						Outers	III	Others	FIK	Others	
F2												6	
F3													

A 17.07.23

Member-Secretary, IAAC

Director

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Annexure I of the 63rd meeting of the IAAC

## Sardar Vallabhbhai National Institute of Technology (SVNIT), Su

	Academic Calendar - Y	ear 20	23-24 (Revised)		
		Au	tumn Semester	W	inter Semester
No.	Activity	Week number	Month and Date	Week number	Month and Date
	Preliminary Activities			3.1	
1	Submission of Applications for PhD and M.Tech. (R)		Till 31 May 2023	S. Sec. 1	Till 30 Nov 2023
2	Registration and Payment of fee	1 (June)	1-21 June 2023	2 (Dec)	4-24 Dec 2023
3	PhD and M.Tech. (R) Written Test / Interview		26-27 June 2023	tere link	11-12 Dec 2023
4	PhD Research Progress Seminar		Till 21 July 2023		Till 29 Dec 2023
5	Late Registration and Payment of Fee with fine	4 (June)	22-30 June 2023	4 (Dec)	25-31 Dec 2023
6	Supplementary Examinations (ODD and EVEN)	2 (July)	10-21 July 2023	2 (Feb)	12 – 24 Feb 2024
7	PhD Comprehensive Examination (Admission before Academic Year 2023-24)	2 (Aug)	7–11 Aug 2023	2 (Mar)	11–15 Mar 2024
	Curriculum Activities				
8	Commencement of Teaching	4 (July)	24 July 2023	1 (Jan)	1 Jan 2024
9	Mid Semester Examination	4 (Sep)	25-29 Sep 2023	4 (Feb)	26 Feb-1 Mar 2024
9(a)	Mid - Minor and Regular Common Subjects	-	2 - 4 Oct 2023		4 – 6 Mar 2024
10	Make up tests and Practical Examination	3 (Nov)	20-24 Nov 2023	3 (Apr)	22-26 Apr 2024
11	XX Grade Submission	3 (Nov)	18 Nov 2023	3 (Apr)	19 Apr 2024
12	Last Day of Teaching	3 (Nov)	24 Nov 2023	3 (Apr)	26 Apr 2024
13	End Semester Examination	4 (Nov)	27 Nov-1 Dec 2023	4 (Apr)	29 Apr-3 May 2024
13(a)	End – Minor and Regular Common Subjects	-	4 – 6 Dec 2023	-	6 - 8 May 2024
14	Project / Dissertation Preliminaries (UG/PG/MSc)	1 (Dec)	4 – 8 Dec 2023	-	-
15	Project (UG)	-		2 (May)	6-10 May 2024
16	Last Date of Dissertation (PG/MSc) Thesis Submission	-	-	4 (Jun)	30 June 2024
17	Last Date of Dissertation (PG/MSc) Viva Voce Examination	-	•	4 (July)	26 July 2024
18	Displaying Marks / Verification Answer books	2 (Dec)	Till 8 Dec 2023	2 (May)	Till 18 May 2024
19	Declaration of Results	3 (Dec)	11-15 Dec 2023	3 (May)	20-25 May 2024
	Extra Curriculum Activities and Vacation				
20	Autumn Technical and Cultural Activities	2 (Oct)	13-15 Oct 2023		
21	Winter Technical and Cultural Activities	-	-	2 (Feb)	16-18 Feb 2024
22	Diwali Break for Faculty and Students	3 (Nov)	13 -17 Nov 2023		-
23	Semester Break (Vacation) for UG Students	3 (Dec)	11-29 Dec 2023	2 (May)	9 May-12 Jul 2024
24	Semester Break (Vacation) for Faculty	4 (Dec)	25-29 Dec 2023	4 (May)	27 May-12 Jul 2024
	Calendar days of Semester (Excluded Sat, Sun)	-	100	-	95
1	Submission of Applications for PhD, M.Tech. (R) and M.Tech. (Sponsored)		Till 31 May 2024	- 8	
2	Registration and Payment of fee	1 (June)	1-21 June 2024		
3	PhD, M.Tech. (R) and M.Tech. (Sponsored) Written Test / Interview		24-25 June 2024		
4	PhD Research Progress Seminar	-	Till 19 July 2024		
5	Late Registration and Payment of Fee with fine	4 (June)	22-30 June 2024		
6	Supplementary Examinations (ODD and EVEN)	2 (July)	8-19 July 2024		
	Academic Vi	ear 2024	-25		L
7	Commencement of Teaching	4 (July)	29 July 2024	5 - F	

\*First-year academic calendar may be announced separately in case of a delay in the admission process.

DEAN (ACADEMIC)



DIRECTOR

20/16/2005

`	DEAN ACADEMIC S.V.N.I.T., SURAT-7	Inword NO'. 220, 302 date. 21/6/2023
	INWARD No. 400	Annexure II of the 63rd meeting of the IAAC
	100 2º (ºSARDAR-VALLA	BHBHAI NATIONAL INSTITUE OF TECHNOLOGY SURAT- 395 007, GUJARAT, INDIA

No. JNP/DoCE/Report/ 1407 / 2022-23

To,

The Director,

SVNIT, Surat.

स. व. रा. प्री. स. सुरत-395007. s.v.n.l.t. surar-395607. analtan aninward to 1497 a antt./Sec. PA-D -> 20/6/23 River Till/Sian ..... Deem (Acad)

Sub : Submission of report for revisions in admission to M.Tech. (Research and Sponsored) and Ph.D. category conversion

Ref : (1) Office Order No. E/636 Dated: 02/06/2023

(2) Office Order No. E/141/661 Dated: 05/06/2023

Dear Sir,

With reference to above cited office orders, please find enclosed herewith the "Proposed Revisions in Admission Criteria and Related Rules for M.Tech. (Research) and M.Tech. (Sponsored) Programs as well as Ph.D. Category Conversion from Full Time Project Staff Scholar to Full Time Institute Scholar" prepared by the committee.

Thanking you,

Date:15-06-2023

Prof. J. N. Patel (Chairman of the Committee)

Encl : As above (03 pages)  $\delta$ 

rearry 1/100/ J2 (100/) (100/)

Toi dy-acol/Mr. Dartha for IAAC/senente

## SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY SURAT, INDIA

Proposed Revisions in Admission Criteria and Related Rules for M.Tech. (Research) and M.Tech. (Sponsored) Programmes as well as Ph.D. Category Conversion form Full Time Project Staff Scholar to Full Time Institute Scholar

#### I. Preamble :

Following revisions are proposed in admission criteria and related rules for M.Tech. (Research) and M.Tech. (Sponsored) programmes as well as Ph.D. category conversion from full time project staff scholar to full time institute scholar. The revisions recommended by the committee are showing the changes to be done in existing rules. The proposed revisions may be incorporated in the respective prevailing rules of the Institutes.

# II. Proposed Revisions in Admission Criteria and Related Rules for M.Tech. (Research) :

- 1. Minimum Percentage or CGPA required for admission for various categories may be kept same as that required for admission in regular M.Tech. programme as per CCMT rules.
- 2. The minimum experience required for admission should be 3 years of full time work experience after graduation in a registered firm / company / industry / educational or research institute / any government department or government autonomous organization. Applicant should have a minimum continuous experience of last 12 months in the sponsoring organization (where the applicant is working at the time of application).
- 3. If the candidate is working in public limited company or in private company, it must be established at least five years prior to last date of application and have annual turnover of Rs 3 crores or more during the last year. Necessary documents in support need to be produced by the applicant.
- 4. Salary Slip of last 12 months of the organization / company where the candidate is working and ITR form / Form 16 of last year should be produced by the candidate.
- 5. Requirement of PF statement of last 12 months is not necessary.
- 4 6. Last minimum gross salary of the applicant should be Rs. 30000/-

Bert.

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- 7. Copy of appointment letter and experience certificate from the all employers should be produced by the applicant.
- 8. The admitted candidate needs to earn 12 credits by attending courses in the class / by NPTEL courses during the first academic year.
- 9. Candidate has to publish one research paper in any of Web of Science / SCOPUS Indexed Journals before being allowed to register for pre-synopsis seminar.
- 10. Maximum number of seats should be limited to five per department and will be supernumerary in nature.

# III. Proposed Revisions in Admission Criteria and Related Rules for M.Tech. (Sponsored) :

- 1. Minimum Percentage or CGPA required for admission for various categories may be kept same as that required for admission in regular M.Tech. programme as per CCMT rules.
- 2. The minimum experience required for admission should be 2 years of full time work experience after graduation in a registered firm / company / industry / educational or research institute / any government department or government autonomous organization. Applicant should have a minimum continuous experience of last 12 months in the sponsoring organization (where the applicant is working at the time of application).
- 3. If the candidate is working in public limited company or in private company, it must be established at least five years prior to last date of application and have annual turnover of Rs 3 crores or more during the last year. Necessary documents in support need to be produced by the applicant.
- 4. Salary Slip of last 12 months of the organization / company where the candidate is working and ITR form / Form 16 of last year should be produced by the candidate.
- 5. Requirement of PF statement of last 12 months is not necessary.
- 6. Last minimum gross salary of the applicant should be Rs. 30000/-
- 7. Copy of appointment letter and experience certificate from the all employers should be produced by the applicant.
- 8. Maximum number of seats should be limited to five per department and will be supernumerary in nature.

Blow.

## IV. Proposed Revisions in Ph.D. Category Conversion form Full Time Project Staff Scholar to Full Time Institute Scholar :

- 1. Full time Project Staff Scholar may be allowed for conversion as Full Time Institute Scholar or Part Time Scholar as per eligibility criteria of the category to be converted to.
- 2. Any category conversion should be allowed after completion of at least 3 semesters in the category from which the conversion is requested as per existing norms.
- 3. Any type of category conversion should be allowed only once during the whole Ph.D. study tenure.
- 4. For conversion from any eligible category to full time project staff, the project must be funded by nationally recognized agency. If the project is not nationally recognized agency, it must be having a duration of 2 years or more.

Prof. K.P Desai

Dr. H R Jariwala (Member)

(Member)

(Member)

Prof. D.C. Jinwala

Prof. J.N. Patel (Chairman)



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Annexure III of the 63rd meeting of the IAAC

### Sardar Vallabhbhai National Institute of Technology

and

## Indian Institute of Technology Bhilai

### MEMORANDUM OF UNDERSTANDING

In order to promote co-operation between Sardar Vallabhbhai National Institute of Technology, hereinafter referred to as "SVNIT" and the Indian Institute of Technology Bhilai hereinafter referred to as "IIT Bhilai", the two institutions agree as follows:

- 1. The two institutions will encourage direct contact and co-operation between their faculty and administrative staff, departments and research institutions.
- 2. Within mutually acceptable fields, the following general forms of co-operation for programmes or activities will be explored for potential negotiation:
  - Visits by and exchanges of faculty members and research scholars
  - Exchange of information including, but not limited to, research publications of faculty members
  - Joint research activities and joint supervision of research work
  - · Joint conferences or symposia on subjects of mutual interest
- 3. It is agreed that the terms and conditions of any agreed programme and activity contemplated in this MoU shall be the subject matter of separate written agreements to be negotiated and agreed upon by both Parties and/or any third parties, wherever applicable. PROVIDED ALWAYS, the decision whether to initiate and/or implement any programme or activity shall be at each party's sole discretion.
- 4. This memorandum is not intended to create binding or legal obligations on either party. It merely expresses the intentions and understanding of the Parties, which will form the basis of any legally binding agreement to be drafted and executed in the future.
- 5. Both parties understand and agree that this memorandum creates no financial obligations on either party, and all financial arrangements will have to be negotiated and will depend on the availability of funds.

- 6. The Parties agree and undertake to keep confidential at all times any confidential information or data that may be exchanged, acquired or shared in connection with any programme or activity conducted pursuant to this MoU save where the same is already in the public domain, obligated by law or otherwise defined in any subsequent agreement on the subject matter.
- 7. This MoU shall have an initial term of two years ending on (17/05/2025) and will be renewed for another period of up to five years' term after reviewing the activities performed under this MoU unless written notice by one party to another party for not renewing the MoU is given not later than one (1) month before the expiry of the current term. This MoU may be terminated at any time by mutual written consent or by three (3) months' notice in writing by either party.
- 8. Each of the institutions will maintain their independent identity, logo symbol, image and make no other claims in their publicity material, media, websites, which is termed to be beyond the scope and nature of activities as incorporated in this memorandum. Each party will consult with and concur with the other party to use the names of the officials'/faculty members, and the logo for the activities under this MoU including dissemination of results and outcome under this MOU, in public.
- **9.** SVNIT Surat and IIT Bhilai agree to respect each other's right to intellectual PROPERTY. Further, all rights linked to ideas, inventions and patents generated during the MoU, if any, shall remain the common intellectual property of the parties. The Parties shall not pass on or give usage rights of such property to any third Party without the consent of the other Party. Any such research collaboration to be taken up during due course of time under the ambit of this present MoU shall be legitimized by signing an agreement.
- **10.** Any dispute, controversy, or claim arising out of or in relation to this MoU, including the validity, invalidity, breach or termination thereof, shall be settled by the parties amicably through mutual consultations and negotiations.
- 11. A party prevented by force majeure from fulfilling its obligations shall not be deemed in breach of such obligations. The said party shall use all reasonable efforts to mitigate consequences of force majeure. At the same time, the Parties shall consult with each other on modalities of further execution of this Memorandum of Understanding. Force majeure as used in this Memorandum of Understanding is defined as acts of God, war (whether declared or not), invasion, revolution, insurrection, or other acts of a similar nature or force.
- **12.** Except for loss or damages caused through gross negligence or intent, the Parties shall have no liability to each hereunder.

Dudit

**13.** Every notice, request or any other communication required or permitted to be given pursuant to this MoU shall be in writing, in English and delivered personally or sent by registered or certified post via airmail or by courier or email (which shall be acknowledged by the other Party) to the Parties at the addresses stated below:

Sardar Vallabhbhai National Institute of Technology, Ichchhanath, Surat-395007, Gujarat, India.

Attention: Prof. Anupam Shukla Position: Director Email: director@svnit.ac.in

Indian Institute of Technology Bhilai, GEC Campus, Sejbahar, Raipur - 492015

Attention: Prof. Rajiv Prakash Position: Director Email: director@iitbhilai.ac.in

**IN WITNESS THEREOF**, the Parties have caused this MoU to be executed by their duly authorized representatives.

For and behalf of SVNIT, Surat

Prof. Anupam Shukla Position: Director, SVNIT, Surat

18.5.23 Date: Witness 1. (Dr. R.R. Jongh PJ) 2. RA2

For and behalf of

IIT Bhilai

give kako Prof. Rajiv Prakash Position: Director, IIT Bhilai

Date: 1815 2023

Witness 1. icertay

2. <u>Latradeep</u> Samanta

#### **Annexure -IV** Of the 63<sup>rd</sup> Meeting of the IAAC

#### INDIAN INSTITUTE OF TECHNOLOGY DELHI FORM PG 13

Ph.D. No.

Name of the Candidate	
Title of the thesis	

Please note that this form should be accompanied by a report commenting on the strengths and weaknesses as well as specific suggestions for improvement of the thesis as per the guidelines given in the covering letter. This recommendation form is to mainly facilitate the Dean (Academics) in deciding appropriate action. Check (v) for your recommendation.

Option I.	The thesis is recommended for <b>award in its present form.</b>	
Option II.	The thesis be accepted for the award after <b>minor revision</b> . I <u>do not</u> wish to examine the response further, and would like the Examination Board to evaluate the response and ensure that the corrections are incorporated in the revised thesis.	
Option III.	The thesis be accepted for the award after <b>minor revision</b> . I <u>do</u> wish to examine the response further, before recommending for award of degree. The revised thesis and candidate's responses to comments may be sent back to me for re-examination.	
Option IV.	The thesis be accepted for the award after <b>major revision</b> requiring rewriting a portion/chapter of the thesis incorporating some additional work. I <u>do not</u> wish to examine the response further, and would like the Examination Board to evaluate the response and ensure that the corrections are incorporated in the revised thesis.	
Option V.	The thesis be accepted for the award after <b>major revision</b> requiring rewriting a portion/chapter of the thesis incorporating some additional work. I <u>do</u> wish to examine the response further, before recommending for award of degree. The revised thesis and candidate's responses to comments may be sent back to me for re-examination.	
Option VI.	<b>Re-writing of thesis after further research</b> is recommended. The re- written thesis should be sent to me for re-evaluation.	
Option VII.	Thesis may be <b>rejected</b> outright.	

2. At IIT Delhi, theses are considered for the award of "Distinction in Doctoral Research". Only upto 10% of the thesis may be given this award. The basis for this award is the excellence in doctoral research reflected by the quality of research produced as documented in the Ph.D. thesis as well as in the public domain.

Would you recommend this thesis for consideration of the award?

Yes/No

Additional Comments, in this regard, if any:

#### Name of the Examiner

Signature of the Examiner

#### FE Ph.D.

#### INDIAN INSTITUTE OF TECHNOLOGY DELHI HAUZ KHAS, NEW DELHI – 110016

Remuneration bill on account of acting as External Examiner for evaluation of Ph.D. Thesis/ conduct of Viva-voce Examination.

Name of the External Examiner :

I Name of Candidate :

Entry No: Deptt./Centre :

#### II. SCALE OF FEES PAYABLE FOR PH.D. EXAMINATION

- (i) For Reading and reporting only : US \$ 500.00
- (ii) Conduct of Viva-voce Examination by Indian External Examiner
- (iii) For Conducting Viva-voce Examination only (without an independent report)
- (iv) Contingencies (Postage etc. to be supported by Voucher)

Total :

Note : As per practice 5% of the remuneration for academic work is credited to the Welfare Fund of the Institute. It

is presumed that you have no objection to this deduction.

# **For payment purposes :** KINDLY GIVE YOUR BANK NAME, BRANCH CODE & A/C. NO./Swift Code

Address :

.....

#### (Signature of External Examiner)

Dated :

(Dear A and or in	Examinership and the particulars of Ph.D. thesis have been verified and found correct.	
(Dean Academics	(Dean Academic	:s)

Date:

### FE Form for Honorarium- Ph.D. No.-

Name of Foreign Examiner	
(in capital letters)	
Mailing Address	
Name and Address of Correspondent Bank	
Intermediary Bank	
Branch/transit	
Institution	
Name of Receiver/beneficiary	
Swift Code	
Bank Account Number	
IBAN Number	
Routing Code	
Contact No.	
E Mail ID	

Department of Computer Science and Engineering, SVNIT, Surat-395007 16/6/2023 Departmental Academic Advisory Committee (DAAC)

Annexure V of the 63rd meeting of the IAAC

No. DoCSE/DAAC/372 /2022-23 Date: 12-06-2023

#### **DAAC** Minutes of Meeting

DAAC meeting was held on 12-06-2023 in the faculty room of the Department at 3:00 pm. Following members were present at the meeting.

- 1. Prof. Devesh C Jinwala, Member
- 2. Prof. Mukesh A Zaveri, Member
- 3. Shri Rakesh P Gohil, Member
- 4. Dr. Rupa G Mehta, Head and Chairperson DAAC
- 5. Dr. Krupa N Jariwala, Member
- 6. Dr. Dipti P Rana, Member
- 7. Dr. Sankita J Patel, Member
- 8. Dr. Bhavesh N Gohil, Member
- 9. Dr. Balu L. Parne, Member
- 10. Dr. Alok Kumar, Member

DEAN AC	ADEMIC SURAT-7
INWARD No	4
OUTWARD No	368
Date 15 106	2023

Following item is discussed and resolution is listed as below.

Item 1: Regarding NPTEL, SWAYAM and other Massive Open Online Course (MOOC) courses to be approved for Semester-III of M.Tech. (CSE)

Resolution 1: MOOC courses attached as Annexure 1 are approved by DAAC.

DAAC ended with thanks to all members.

- anni 1223

(Dr. Sankita Patel) Member Secretary, DAAC, DoCSE

Enclosures:

Annexure 1 (List of courses offered on Swayam portal)

(Dr. Rupa G. Mehta)

Head, DoCSE and Chairperson DAAC

विभागाध्यक्ष /Head खंगणक विज्ञान एवं अभियांत्रिकी विभाग Department of Computer Science and Engineering स.व.रा.मी.सं., स्रत-७/S.V.N.I.T., Surat-7

Deam. (Acad.)

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# <u>Annexure 1</u>

# <u>List of Courses offered on Swayam Portal (https://swayam.gov.in)</u>

		Institute	Faculty Name	Duration	Credit
Sr. No	Name of Course	Institute IIT Datas	Prof Rajiy Misra	8 weeks	2
1	Big Data Computing	III, Faula	Prof Raginathan Rengasamy,	8 weeks	2
2	Data Science for Engineers	III, Mauras	Prof. Shankar Narasimhan		
	The Arel Amplications of Machine	UT Kharagpur	Prof. Adway Mitra	8 weeks	2
3	Foundations And Applications of Machine	in, indianopra			
	Learning	UT. Kharagpur	Prof. Adway Mitra	8 weeks	2
4	Machine Learning for Lattin System				
	Sciences	IIT. Kanpur	Prof. Manindra Agrawal	8 weeks	2
5	Modern Algebra	IIT Delhi	Prof. Smruti Ranjan Sarangi	12 weeks	3
6	Advanced Distributed Systems	IIT Palakkad	Prof. Satyajit Das,	12 weeks	3
7	Applied Accelerated Artificial Intemgence		Prof. Satyadhyan Chickerur,		
			Prof. Bharatkumar Sharma,		
<u>.</u>			Prof. Adesuyi		
	A start LL to Higgman Sourch Methods For	UT Madras	Prof. Deepak Khemani	12 weeks	3
8	Artificial Intelligence: Search Methods For	111, 19 19 19 19 19 19 19 19 19 19 19 19 19			
	Problem Solving	UT Hyderabad	Prof. Vineeth N Balasubramanian	12 weeks	3
9	Deep Learning for Computer vision				
	Die 6 La lamontation Of Human-	IIT Guwahati	Prof. Samit Bhattacharya	12 weeks	3
10	Design & Implementation Of Human	111, 00			
	Computer Interfaces	IIT Bombay	Prof. Swaprava Nath	12 weeks	3
11	Introduction to Game Theory and	III, Domoay			
	Mechanism Design	UT Kharagpur	Prof. Sudip Misra	12 weeks	3
12	Introduction To Industry 4.0 And Industrial	111, 111, 111, 19, 19, 19, 19, 19, 19, 1			
	Internet of Things	IIT Guwahati	Prof. John Jose	12 weeks	
13	Multi-Core Computer Architecture	UT Gandhinagar	Prof. Neeldhara Misra,	12 weeks	3
14	Parameterized Algorithms	111, Outomber 6	Prof. Saket Saurabh		
	In the 10 miter In Online Social	IIIT Hyderabad	Prof. Ponnurangam Kumaraguru	12 weeks	3
15	Privacy And Security in Online Social	1111, 11, 10, 10, 10, 10, 10, 10, 10, 10			
	Media	IIT Delhi	Prof. Tanmoy Chakraborty	12 weeks	s   3
16	Social Network Analysis				
	T (UITD)	UIT Bangalore	Prof. Meenakshi D'souza	12 weeks	$\frac{3}{3}$
17	Software Lesting (III 1 B)	UT Kharagnur	Prof. Monalisa Sarma	12 weeks	s <u>3</u>
18	Statistical Learning for Renability Analysis	UT Madras	Prof. Balaraman Ravindran	12 week	s <u>3</u>
	Reinforcement Learning	UT Kharagpur	Prof. Pawan Goyal	12 week	s 3
20	Natural Language Processing				

# MEMORANDUM OF UNDERSTANDING (MoU)

### BETWEEN



## SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY SURAT





भारतीय प्रौद्योगिकी संस्थान जम्मू INDIAN INSTITUTE OF TECHNOLOGY JAMMU

## INDIAN INSTITUTE OF TECHNOLOGY JAMMU

FOR

## ACADEMIC, RESEARCH COLLABORATIONS & STUDENTS EXCHANGE PROGRAMMES

Place: Jammu

Date: 08 June, 2023

#### MEMORANDUM OF UNDERSTANDING

#### BETWEEN

#### SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT

#### AND

#### INDIAN INSTITUTE OF TECHNOLOGY, JAMMU

#### This is a Memorandum of Understanding (MoU) Dated 8<sup>th</sup> June 2023

#### between

Sardar Vallabhbhai National Institute of Technology, Surat (SVNIT, Surat), a premier academic institution of Repute, incorporated under National Institute of Technology Act, 2007, having its permanent campus and office at SVNIT, Ichchhanath, Dumas Road, Surat – 395 007 Gujarat

#### and

The Indian Institute of Technology Jammu, recognized as an "Institute of National Importance" under the "Institutes of Technology Act" of 1961, is an autonomous public higher education Institute funded by the Government of India, and functions under the governance of the IIT Council. IIT Jammu was inaugurated on 6th August 2016 and is located in its permanent campus and office at **IIT Jammu, Jagti, NH-44**, **PO Nagrota, Jammu - 181 221 J&K** 

Sardar Vallabhbhai National Institute of Technology, Surat (SVNIT, Surat) and Indian Institute of Technology Jammu (IIT Jammu) have agreed to the following protocols governing their collaboration on academic and research activities.

#### 1. Scope

The scope of collaboration on academic and research activities in this Memorandum of Understanding includes the following categories.

- (i) It is expected that this collaboration will in due course lead to collaborative research projects in areas of common interest, joint supervision of PhD students, organization of joint workshops and seminars, etc.
- Exchange of students and faculty, exchange of academic information, scholarly information, materials and publications as per the rules of both the institutes and consent of involved persons.
- (iii) Admission of SVNIT, Surat students for direct or early MTech./ Ph.D. at IIT Jammu/Joint PhD/PG, subject to the existence of the policy approved by the appropriate body of the host institution. The applicable rules and regulations shall be determined and as approved by the respective Senates of both the institutes in concurrence with one another.
- (iv) Creating a shared pool of faculty members in each basic discipline at IIT Jammu and the SVNIT Surat. Such a shared pool of faculty expertise is meant to facilitate the reciprocal utilization of the expertise of faculty members at one institute for teaching courses, conducting joint research, submission of joint project proposals, and other collaborative academic activities at the other institute. The *modus operandi* of these joint activities shall be laid out after mutual approval of terms and conditions formulated and mutually agreed upon by the two institutions

#### 2. Research Collaboration

Faculty from both Institutions will collaborate in the supervision of exchange students and in joint research in disciplines of mutual interest. All such joint research activities will be governed by the terms as given below:

- 2.1 Proposals for collaborative research work under this Memorandum will be submitted with the prior approval of the Head of each institution, or his/her nominee.
- 2.2 Each institution will nominate one of its members as its representative in charge of the cooperative programme. Individual programmes of work under this Memorandum will be jointly planned and conducted by the nominees of both Institutes.
- **2.3** Progress of work of any individual programme will be reviewed and approved by designated authorities of both Institutes.
- **2.4** The final approval of any project will depend on the availability of guaranteed support funds.
- 2.5 Neither SVNIT, Surat nor IIT Jammu will be held responsible for any liability to the other party, and neither party shall be required to purchase any insurance against loss or damage to any property due to activities to which this agreement relates.
- **2.6** Every collaboration will have its own agreement/contract which addresses issues such as IPR, funding pattern, usage policies of research facilities, disclosure of information etc.

#### 3. Students and Faculty Exchange

Both the Institutes will encourage exchange of B.Tech, M.Tech students, and faculty, according to the terms laid out in this MoU. It is expected by both the parties that there will be a significant flow of students/faculty in both directions.

- **3.1** Students under the exchange programme will be classified as "Exchange students". The exchange students will be permitted to take courses on credit/audit, as well as participate in research activities/internships/project work.
- **3.2** In any such cases, prior consent of the teacher/project supervisors/research supervisors must be obtained. Such consent will take into account, among other things, whether the student has pre-requisites for the course/project.
- **3.3** Neither institution will levy admission or tuition fees on exchange students studying for a short duration in a particular semester. However, their short-term stay will be subject to lodging and boarding charges. The exchange visits of students for a full semester or more shall be decided on the basis of the terms and conditions mutually agreed upon by both the parties.
- **3.4** Course credits and grades earned will be determined by the home institution based on the grade report issued by the host institution.
- 3.5 The number of students and duration of stay will be worked out on a case-to-case basis.
- 3.6 Participants may not spend more than one year normally in the exchange programme.
- **3.7** Participants will adhere to the rules and regulations of the host institution and adjust to available resources by conforming to appropriate guidelines.
- **3.8** The faculty of SVNIT, Surat may also apply for suitable postdoctoral positions or any other similar opportunities available at IIT Jammu. Availing any such opportunity at IIT Jammu will be subject to administrative terms and conditions of SVNIT, Surat in regard to relieving the faculty of their regular duty in the parent institution.

#### Selection and Nomination

Applications will be invited from the students of SVNIT Surat for the exchange program. The selection and nomination of students is open throughout the academic year. The nomination of students shall be accompanied by

- (i) Curriculum vitae
- (ii) Statement of aptitude from a member of the student's school/faculty.
- (iii) A specific outline of the programme of study intended at the host institution, and a statement of objectives of the study program.

It is presumed that, when a nomination is forwarded to the host institute, the home institute considers the nominated student to be adequately suitable for the proposed program, and consents to send the student if selected by the host institution.

The host institution will evaluate the nominations and determine their suitability for selection under the Exchange Programme.

Where the exchange student is pursuing a research or implementation project as part of the UG/PG/PhD, (or equivalent) degree programme, the host institution will provide a suitable faculty member to jointly assist (along with the supervisor in the parent Institution) the exchange student in formulating a research project, or jointly supervising the exchange student in the event that a research project has already been identified.

The host institution will inform the home institution of any academic or other problems that may arise for a student during the period of his/her residency in the host institution. The host institution in cooperation with the home institution will deal with and try to manage such problems.

#### **Course Identification and Course Credit**

The identification of courses available and offered at IIT Jammu, which may be considered equivalent in standard to courses taught at SVNIT Surat for the completion of credit requirements of the B. Tech. program of SVNIT, will be decided by the appropriate Academic Bodies of SVNIT, for each individual student, in concurrence with decisions taken by the relevant Departments/Disciplines at IIT Jammu.

#### 4. Direct M.Tech/Ph.D Admission

#### Providing an opportunity to the students currently pursuing Bachelor of Technology (B. Tech.) SVNIT to explore the option to undertake courses in IIT Jammu and be considered for early admission to the M. Tech/PhD programme at IIT Jammu.

This scheme is intended to enable meritorious B.Tech students of SVNIT, Surat to carry out part of their studies, including project work, at IIT Jammu and offer an opportunity for direct admission to M.Tech/PhD without the need to qualify GATE or any other national level examination. This will enable qualified B. Tech. students into the M.Tech./PhD programme as early as the end of their 6<sup>th</sup> semester. Students under the Direct M.Tech./Ph.D. programme will be classified as "Visiting students" till the completion of their B.Tech. Degree. It is envisaged that this scheme will also help SVNIT, Surat students to enhance their chances of qualifying for the PMRF fellowship for PhD at IIT Jammu.

**4.1 Student Selection:** Under this scheme, SVNIT, Surat students who have a CGPA of 7.5 at the end of their sixth semester (end of third year), will be eligible to apply to IIT Jammu and complete their fourth year (7<sup>th</sup> and 8<sup>th</sup> semesters), at IIT Jammu, and then be considered for an early admission into the M.Tech./PhD program at IIT Jammu, subject to maintaining an overall CGPA of 7.5 in UG degree. However, having a CGPA of 7.5 does not guarantee their selection in the early-induction PhD program at the IITJMU.

All applications will be received through a portal set up for this purpose, through which they will submit their transcripts, and other academic records and achievements, and documentary evidence of any research or internship experience.

Upon selection, through a selection committee set up for the purpose, the students will have an offer of admission to the M.Tech./PhD program. The students are expected to demonstrate sufficient merit in course work, project work and/or research during their 7<sup>th</sup> and 8<sup>th</sup> semesters of B.Tech in order to continue towards getting the offer of admission into the M.Tech/PhD program. If the performance of the students is not up to the mark as per the guidelines of IIT Jammu, the students will be required to withdraw from the programme and return to their home institute, SVNIT, Surat, along with the credits earned. During their stay through the 7<sup>th</sup> and 8<sup>th</sup> semesters in IIT Jammu, the students will have the status of a Visiting Student, and will enjoy all the privileges of a regular full-time student at IIT Jammu.

#### 4.2 Non-completion of B. Tech. Requirements at IIT Jammu

If a visiting student's performance is found unsatisfactory at the host institution (that is, unable to obtain the seven-grade point on the scale of 10), the student shall be transferred back to the home institution (SVNIT) along with credits earned. Such a student will not thereafter be considered for the early induction M.Tech/PhD programme at IIT Jammu. However, any such student back in SVNIT Surat will be entitled to get the B. Tech. degree, provided he/she completes all the requirements of the B. Tech. programme at SVNIT Surat.

**4.3** During their stay through the 7th and 8<sup>th</sup> semesters in IIT Jammu, the students may take appropriate courses to satisfy the credit requirements for their B.Tech registration in their parent institution (SVNIT, Surat). IIT Jammu will certify the completion of the courses and the grades obtained, including project works done at IIT Jammu. The courses to be taken by the student at the host institution must be discussed well in advance with the relevant person of contact (preferably Dean of Academics) at the home institute, so that there is no repetition of any courses during the 7<sup>th</sup> or 8<sup>th</sup> Semester. It is the responsibility of the visiting student to coordinate with both the institutes and become familiar with the courses to be offered in the 7<sup>th</sup> and 8<sup>th</sup> semesters at IIT Jammu. They must ensure that these courses are suitable for the eventual award of B.Tech degree by SVNIT. In case a particular course has already been completed at the home institution, the host institute may offer alternative suitable courses after the respective HoDs/Faculty Advisors of both the institutions mutually agree on the appropriate choice of alternative courses.

**4.4** Students will join the M.Tech/PhD program only after the completion of all graduation requirements at SVNIT, Surat, which would be typically in the month of July. All shortlisting criteria and admission criteria must be satisfied by the student at the time of joining PhD as well. Requirement of GATE will be waived, given that a minimum CGPA of 7.5 is a necessary condition for admission into the M.Tech/PhD programme of IIT Jammu.

**4.5.** For all academic/project work undertaken at IIT Jammu, transcripts will be provided with relevant credits. However, the calculation of these credits for the purpose of mapping them on to the letter grades will be left to SVNIT, Surat as per their grading system. Students may also undertake Pre-Ph.D. courses for earning additional credits for their M.Tech/PhD program, during their stay (in a regular semester) at IIT Jammu. Students can later claim these courses for their M.Tech/PhD degree requirement. However, such courses shall not be used for the award of B.Tech degree at SVNIT, and a certificate of commitment to this effect shall be submitted by the student.

**4.6.** Students coming under this program will not be entitled for participation in the Training & Placement process and campus placement for UG students in IIT Jammu or in SVNIT, Surat. This condition will be clearly stated in the letter offering admission.

**4.7** By default, the admission is an entry into a "Direct PhD programme" for a student who satisfies all the prerequisites of admission laid down by IIT Jammu. However, a student will have an exit option, with an M. Tech. Degree, after two years of study in the programme, provided the credit requirements for the award of an M. Tech. Degree by IIT Jammu are fulfilled by the student.

#### 5. Commencement, renewal, termination, and amendment

This MoU will come into force upon affixing of the signatures of the representatives of the partner institutions and will remain in effect for **five (5)** years. This MoU may be renewed upon its expiry, with the agreement of both the partner institutions. If either partner institution wishes to terminate

the MoU before five years, it must notify the other institution not less than six months prior to the expiry of the MoU.

This MoU or its renewal and the actions taken under it may be reviewed at any time. Modifications may be made by mutual agreement and any amendment or extension to the agreement may be formalized by the exchange of letters between the two parties.

Signed by:

(Prof. Manoj Singh Gaur) Director Indian Institute of Technology, Jammu Jammu & Kashmir

Date: 08 June 2023

Institute Seal:



Signed by:

STITI

SURAT

(Prof. Dr. Anupam Shukla) Director

Sardar Vallabhbhai National Institute of Technology, Surat, Gujrat

Date: 08 June 2023



Of the 63<sup>rd</sup> meeting of the IAAC सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान, सूरत (गुजरात,भारत) SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT (GUJARAT, INDIA)

Annexure-VII

Upon recommendation of the Senate

hereby confers the degree of

# Bachelor of Technology

in Mechanical Engineering

on

# Rane Gajanan

who has successfully completed the course of studies as prescribed under the regulations, passed the examination in April/May 2023 with Cumulative Grade Point Average (CGPA) 9.44 and MINOT in Computer Science and Engineering with Cumulative Grade Point Average (CGPA) 8.44 Given this day, under the seal of the Institute at Surat In the Republic of India, the Twenty Seventh of October, 2023.



सरदार वल्लभभाई राष्ट्रीय प्रौद्योगिकी संस्थान, सूरत (गुजरात,भारत) SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT (GUJARAT, INDIA)

Upon recommendation of the Senate

hereby confers the degree of

# Doctor of Philosophy

on

# Rane Gajanan

who has fulfilled the requirements for the degree as prescribed under the regulations and has successfully defended in July, 2023, the thesis entitled: Contributions to the Estimation and Control of Nonlinear Dynamic Systems via Carleman Linearization

Given this day, under the seal of the Institute at Surat

In the Republic of India, the Twenty Seventh of October, 2023.

#### Annexure –VIII of the 63<sup>rd</sup> meeting of the IAAC

#### **Department of Mechanical Engineering Vocational Training / Professional Experience** (Mandatory for Exit; and Optional for others)

### **VOCATIONAL TRAINING (1<sup>st</sup> Semester)**

#### ME XXX

#### **Contact Hours: 200**

#### **Course Outcomes (COs):**

At the end of the course, students will be able to:

- CO1 describe the machine tool parts and cutting tools for a selected part
- prepare sample jobs on selected machine tool using different operations, CO2 mechanisms with cutting tools
- demonstrate knowledge of the operating parts of common IC engines CO3
- classify vehicles based as per central motor vehicle rule (CMVR). CO4
- CO5 Identify trade related hazards and safety procedures following safety precautions.
- CO6 Analyze RAC tools & equipment and recognise different parts of RAC system, and perform operations, i.e., copper tube cutting, flaring, swaging, and brazing.

#### (a) Machining Processes

#### 1. To develop understanding of machine tool parts and cutting tools Hours)

Construction and working of various parts of a machine tools like lathe, milling, drilling, shaping and grinding; kinematics of the machine; special mechanisms, accessories and attachments, cutting tools

#### 2. Practice for lathe operations

Preparation of jobs that involve various lathe operations like centering, facing, turning, step turning, taper turning, grooving, knurling, drilling, boring, etc.

#### 3. Practice for shaping operations

Preparation of given job on shaping machine using various operations and shaping mechanisms

#### 4. Practice for milling operations Practice of given job on vertical and horizontal milling machine using various operations and milling cutters

#### 5. Practice for gear cutting (05 Hours)

Practice of given job to prepare a spur gear using indexing mechanism

### 5. Practice for grinding operations

Practice of given job on grinding through selected grinding wheels

(05 Hours)

# (10 Hours)

(20 Hours)

(10

#### (10 Hours)

#### (b) Internal Combustion and Automobile Engineering (ICAE)

#### 1. DEMONSTRATION OF ENGINE AND ENGINE PARTS (04 Hours)

Demonstration of internal & external combustion engines, Classification of IC engines. Main Parts of IC Engine, Direct and Indirect injection, Technical terms used in engine, Engine specification

#### 2. DEMONSTRATION OF HYDRAULIC AND PNEUMATIC (25 Hours) COMPONENTS USED IN VEHICLE

Demonstration to Hydraulics & Pneumatics- Description, symbols and application in automobile, Internal & External components, single acting, double acting & Double ended cylinder; Directional control, Pressure relief valve, Non return valve, Flow control valve used in automobile, Tracing of hydraulic circuit on hydraulic jack, hydraulic, and Brake circuit, Identification of components in Air brake systems

#### 3. DEMONSTRATION OF THE DIFFERENT PARTS IN AN ENGINE (25 Hours) OF LMV/ HMV

Demonstration of vehicles on the basis of load as per central motor vehicle rule (CMVR) 1989, wheels, final drive, and fuel used, axles, position of engine and steering transmission, body and load, demonstration of vehicle specification data, Identification of vehicle information Number (VIN). Demonstration of Garage, Service station equipment - Vehicle hoists Two post and four post hoist, Engine hoists, Jacks, Stands.

#### 4. **PERFORMANCE PRACTICE ON DIESEL ENGINES**

Practice on starting and stopping of diesel engines. Observation and reporting of the reading of Tachometer, Odometer, Temperature and Fuel gauge under ideal and on load condition.

#### 5. PERFORMANCE PRACTICE ON PETROL ENGINES

Practice on starting and stopping of petrol engines. Observation and reporting of the reading of Tachometer, Odometer, Temperature and Fuel gauge under ideal and on load condition.

## (c) Refrigeration Engineering

#### **1** Introduction:

Importance of the trade in domestic, industrial & commercial fields, industrial safety & fire fighting, occupational health & safety, use of firefighting equipment, different gas cylinder handling procedure, handling of HC refrigerants & safety observation. Dos & Don'ts in RAC workshop.

#### 2 Familiarization with the RAC equipment, tools & materials: (06 Hours)

Introduction, orientation & familiarization with the equipment, tools & materials, fundamentals and different terminology of RAC machineries, wiring of domestic refrigeration appliances (conventional and frost free), measurement of different parameters like pressure, temperature, heat, humidity, and velocity.

#### 3 Methods of Refrigeration:

Ice refrigeration, dry ice, steam jet, gas throttling, liquid gas, air refrigeration, vapour absorption, vapour compression, thermo electric, magnetic, thermo acoustic, pulse tube, vortex tube, observation of various thermodynamic processes take place while working,

#### (06 Hours)

(08 Hours)

(08 Hours)

### (06 Hours)

#### Page 2 of 5

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#### calculation of refrigeration capacity (TR)

#### 4 **Fault findings:**

Faults finding and remedial measures of components used in RAC systems, dismantling and assembling of various types of compressors like reciprocating, rotary, and scroll.

#### 5 **Compressors:**

(06 Hours) Types of compressor used in domestic appliances, i.e., reciprocating, rotary, scroll, and screw, dismantling and assembly of open type and sealed type compressors, blower motors, checking of bearing/ bush, and centrifugal switch, checking of worn-out parts, inspection and measurement of clearance, diameter by micrometer, vernier callipers, replacement and compensation of lubricant in compressor.

#### 6 **Condensers:**

Types of condenser used in domestic appliances, i.e., water cooled, air cooled, and evaporative, finding out the heat rejection factor, condenser capacity, efficiency & effect of fouling factor. repairing of air-cooled condenser, water cooled condenser and evaporative condenser.

#### 7 **Expansion Device:**

#### Hours)

Types, construction, working, adjustments & application, capillary bore checking, performance test conducted by test rig (consisting of capillary tube and TEV) for finding C.O.P, familiarization of capillary selection guide, measuring superheat, observing the working of pilot solenoid valve.

#### 8 **Evaporator:**

Types (domestic & Commercial), construction, working (Direct & Indirect systems), DX chiller, flooded, types & application, comparison of performance of single, double, multi feeding evaporators, comparison of different diameter & length of capillary vs performance, use of anti-freezing thermostat.

#### 9 **Refrigerants:**

Description, function, composition, application & types, environmental impact of different refrigerants, alternatives of CFCS, thermodynamic properties & characteristics of ideal refrigerants, azeotropic and zeotropic blends, description ODP, retro fitting, filter, and drier, identification of refrigerant cylinders by colour coding & standing pressure, types of cylinders, refrigerant recovery (active & passive method), use of piercing valve, HC blend charging, importance of molecular sieve drier (XH-5, XH-7, XH-9), retrofitting of CFC filled refrigerator in to HFC-134a, retrofitting of CFC-12 into HC blend, limitation of retrofitting, tripple evacuation method.

#### 10 **Secondary Refrigerants:**

Properties of brines & glycols, application of various brines, inhibitor & other secondary refrigerants, finding out the eutectic temperature of Sodium chloride & Calcium chloride brine, calculation of heat removal rate of various brines.

#### 11 **Tribology for RAC systems:**

Basic concepts of tribology, lubricants & lubrication in RAC compressors, properties of

## (06

(06 Hours)

## (06 Hours)

#### (04 Hours)

# (06 Hours)

### (04 Hours)

### (08 Hours)

lubricants, thermal insulation types & function, properties of insulating materials, identification of lubricants grades, unit, types, mineral oil & POE oils, oil charging of domestic & commercial compressors, different methods.

## 12 Thermal insulation:

### Hours)

Types, selection of insulating material, duct insulation & properties of insulating materials, technique of glass wool filling method in conventional refrigerator, PUF, and PUF mixing procedure.

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### Professional Software Practice-I, 2<sup>nd</sup> Semester

L	Т	Р	С
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#### 1. <u>Course Outcomes (COs)</u>

At the end of the course the students will be able to:

- CO1 Apply 2-D drafting commands in CAD software.
- CO2 Perform drafting of geometrical figures.
- CO3 Perform drafting of planar figures.
- CO4 Perform drafting of solid objects.
- CO5 Utilize drafting skills for engineering problems.

### 2. Syllabus

# • INTRODUCTION TO 2-D DRAFTING IN CAD SOFTWARE (60 Hours)

Introduction to Layout, Workspace area, Setting units, Types of views, Commands in AUTO CAD – Line, Polyline, Circle, Rectangle, Ellipse, Centreline, Arc, Chamfer, etc. Dimensioning, Editing commands - Trim, offset, Fillet, Break etc. Constraints, Manging commands – Move, Array, Rotate, Block, Hatch etc. Templates, Annotations, Adding text.

# • DRAFTING OF GEOMETRICAL FIGURES Hours)

Drawing Instruments, Drafting of lines, Straight lines, Parallel lines, Triangles, Circles, Parallelogram, Angle bisector, Line bisector, Arc bisector, Regular Polygons, Square, Rectangle, Pentagon, Hexagon, Heptagon, Octagon, Ellipse, Parabola, Hyperbola, Dimensioning of figures, labelling of Figures.

# • DRAFTING OF LINES AND PLANAR FIGURES (40 Hours)

Horizontal and vertical reference lines/planes, First angle and Third angle projections, Drafting orthographic views (Front view, Top view, Side view) of points, lines, inclined lines, plane laminar figures, inclined planes.

# DRAFTING OF SOLID OBJECTS Hours)

Drafting Orthographic projection of solid objects (prism, cone cylinder, pyramids, frustum, Dimensioning and labelling of orthographic views, Sectional views of solids, Hatching of cross section, Orthographic view from isometric view.

(Total: 200 hours)

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(60

#### Annexure -IX of the 63rd meeting of the IAAC

## Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat

Ph.D. – I (Physics), Semester – I / II Research Methodology in Science	Scheme	L	Т	Ρ	Credit
PH601/ PH602		4	0	0	4

1.	Course Outcomes (COs):
CO1	To identify and formulate a research problem for a given specialisation with good research ethics.
CO2	To perform statistical analysis of the sample data collected using various sampling techniques and statistical softwares.
CO3	To apply hypothesis testing techniques using different sampling distributions/tests.
CO4	To compile information to prepare an effective research report and paper.
CO5	To prepare and present a research poster and oral presentation effectively to the peers.

2.	Syllabus		
	Foundation of Research	06 Hours	
	Meaning of research, Objectives, Motivation, Utility, Characteristics and Types scientific methods, understanding the language of research: Concept, Construct, Scientific Research Process. Steps of research, methods of research, research eth Intellectual Property Rights (IPR).	<ul> <li>Characteristics of definition, Variable.</li> <li>hics, Introduction to</li> </ul>	
	Problem Identification & Formulation:	12 Hours	
	Definition and formulating the research problem, Necessity of defining the problemature review in defining a problem. Literature survey: primary and secon critical literature review. Research question, Investigation question, Hypothesis te good hypothesis, Null hypothesis and Alternative Hypothesis.	lem, Importance of dary; web sources; esting, Qualities of a	
	Research Design:	08 Hours	
	Concept and importance in research, features of a good research design, Exploratory Research Design: Concept, types and uses, Descriptive Research Design: Concept, types and uses. Experimental Design: Concept of independent and dependent variables. Biased and unbiased research design.		
	Sampling Fundamentals:	08 Hours	
	Need for sampling, Steps in sampling design, Different types of sample designs sampling designs, Important sampling distributions (of mean, proportion, t-, distribution), Central limit theorem, Concept of standard error, Estimating po proportion, Determination of sample size through confidence level, probabil probability distributions.	s, Complex random F-, and Chi-square pulation mean and ity estimation and	

Subject Code:##nXX; ##: Department Identity, n: Year, XX: Subject Sequence number XX: last digit 0 (subject offered in both ODD and EVEN semesters, XX: 01 to 30 – last digit ODD and EVEN for ODD and EVEN semesters (Mandatory Core), XX: 31 to 50 (Optional Core), XX: 51 to 99 (Elective), Subjects list for Minor and Honor (M/H#1-4), Subjects list for Specialization track (#1-4)EG: Engineering Subject, SC: Science Subject (offered combinedly by departments) (SVNIT Surat)



## Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat

Measurement, Data, and Analytics	08 Hours
Structured and unstructured data, Scales of measured statistics, Data visualization. Probability and random vari testing, Analysis of variance (ANOVA), Correlation, and R of association, Clustering, and Classification. Brief introdu available software packages, e.g. ORIGIN, MS Office, etc.	ment, Population and sample, Descriptive iables, Sampling and estimation, Hypothesis egression analysis. Data Analytics: Elements uction to various open-source/commercially
Interpretation of Results, Research Documentation and	Presentation 06 Hours
Understanding of interpretation of results, Steps of inter paper and a thesis: Abstract, Keywords, Symbols and Methods (Theoretical/Experimental), Results and References/Bibliography, Table of Content (ToC), Scope good English writing. Ethical issues related to publishing detection software's (Turnitin, etc.). Types of presentatic	rpretation; Elements of preparing a research Abbreviations, Introduction, Materials and Discussion, Conclusions, Citations and of future work and Appendixes. Elements of g, Plagiarism and Self-plagiarism, Plagiarism on: Poster, Oral and Invited talk.
Students Assignments, Discussion and Review	08 Hours
(a) Read, evaluate and present a good journal paper literature review for a specific research topic and pre sample research paper and thesis proposal.	in relevant field of research; (b) Conduct pare a report with citations; (c) To write a
	(Total Contact Time: 56 Hours)

3.	Books Recommended
1	C. R. Kothari and G. Garg, Research Methodology: Methods and Techniques, 4th Edition, New Age International, 2019.
2	D. Napolean and B. B. S. Narayanan, Research Methodology – As Theoretical Approach, Laxmi Publications, 2014.
3	B. L. Garg, R. Karadia, F. Agrawal and U. K. Agrawal, An Introduction to Research Methodology, RBSA Publishers, 2002.
4	P. R. Bevington and D. K. Robinson, Data Reduction and Error Analysis for the Physical Sciences, 3rd Ed. by McGraw – Hill (2003).
5	H. S. Asthana and B. Bhushan, Statistics for Social Sciences (With SPSS Applications), 2nd Edition, PHI Learning, 2016.

Subject Code:##nXX; ##: Department Identity, n: Year, XX: Subject Sequence number XX: last digit 0 (subject offered in both ODD and EVEN semesters, XX: 01 to 30 – last digit ODD and EVEN for ODD and EVEN semesters (Mandatory Core), XX: 31 to 50 (Optional Core), XX: 51 to 99 (Elective), Subjects list for Minor and Honor (M/H#1-4), Subjects list for Specialization track (#1-4)EG: Engineering Subject, SC: Science Subject (offered combinedly by departments) (SVNIT Surat)