

# **Research and Consultancy Brochure**

# श्री माता वैष्णोदेवी विश्वविद्यालय

# SHRI MATA VAISHNO DEVI UNIVERSITY

Kakryal, Katra-182320, Jammu & Kashmir Recognized under Section 2(f) & 12(B) of the UGC Act, 1956

# **Content**

Vision, Mission, Core Values	3
PREFACE	4
School of Biotechnology	5-21
School of Mathematics	21-24
School of Physics	25-28
School of Computer Science & Engineering	29-33
School of Electronics & Communication Engineering and Electrical Engineering	34-38
School of Architecture & Landscape Design and Civil Engineering	39-43
School of Energy Management	44-46
School of Mechanical Engineering	47-49
School of Business	50-56
School of Economics	57-59
School of Languages & Literature	60-65
School of Philosophy & Culture	66-68



#### Vision

The vision of the university is Establishment of a Scientific & Technical University of Excellence to nurture young talented human resource for the service of Indian Society & World at large preserving the integrity and sanctity of human values.

#### Mission

The Mission of SMVD University is the pursuit of Education, Scholarship and Research and its application to the Society at highest International levels of excellence.

The objectives of the University are:

- To provide education and training of excellent quality both at UG & PG levels.
- 2. To ensure that the University achieves and maintains an international standing in both teaching and research.
- 3. To promote study and research in new and emerging areas and encourage academic interaction of the faculty and students at national and international levels.
- 4. To encourage close collaboration with industry and facilitate the application of research for commercial use and for the benefit of society.

#### Core Values

- 1. Academic Integrity and Accountability.
- 2. Respect and Tolerance for the views of every Individual.
- 3. Attention to issues of National relevance as well as of global concern.
- 4. Appreciation of intellectual excellence and creativity.
- 5. Ceaseless aptitude of scientific exploration.

### **PREFACE**

Shri Mata Vaishno Devi University (SMVDU) has been established under THE JAMMU AND KASHMIR SHRI MATA VAISHNO DEVI UNIVERSITY ACT, 1999, an Act of the J&K State Legislature (ACT No. XII of 1999 dated 12th May 1999) as an autonomous, highly Technical & fully Residential University. The University started functioning as an academic unit in Aug 2004 when it was inaugurated on 19th August 2004 at the hands of the then Hon'ble President of India Dr. A.P.J Abdul Kalam.

The University is approved by UGC under Section 2(F) & Section 12(B) of UGC Act of 1956. The technical programs of the University are recognized by AICTE while Architecture program is recognized by Council of Architecture.

The University receives funding from Shri Mata Vaishno Devi Shrine Board, an autonomous Board set up under the provisions of The J&K Shri Mata Vaishno Devi Shrine Act, 1986 of J&K State Legislature. The University also gets funds from the J&K State government and also obtained funds from UGC in XI<sup>th</sup>&XII<sup>th</sup> Plan.

SMVD University is ranked 94 among the Top 100 Institutions in the country and mong Top 150 universities in the country as per NIRF 2018. It is also selected as part of World Bank assisted TEQIP-III Scheme of MHRD.

Hon'ble Governor of the J&K State is the Chancellor of the University and its executive council includes luminaries like Prof. K.L. Chopra (Former Director IIT Kharagpur), Prof. Goverdhan Mehta (Former Director IISc. Bangalore), Sh, R.P. Agarwal, IAS (Former Secretary MHRD).

In SMVDU, each school Each School has clearly established specific research areas and the faculty members and students work towards goals within these specific research areas. The research facilities are augmented accordingly. The faculty members of the University have an impressive record of more than 369 publications in SCI/SCIE/SCOPUS/ABDC indexed research journals.

At present, the university has 28 running projects sponsored by premier central funding agencies of the country besides 08 no. of consultancy projects in hand.

Name of the School: School of Biotechnology

Year of establishment: 2005

**Contact:** Prof. V. Verma, Head, School of Biotechnology

#### **Brief Profile of School:**

Biotechnology continues to expand rapidly with new discoveries at a breathtaking pace. This industry, a merger of science and business, demands a multi-disciplinary workforce skilled in basic-research, product development, regulatory affairs and commercialization.

Recognizing this wider impact of biotechnology education and research in the 21<sup>st</sup> century, School of Biotechnology at SMVDU has placed due emphasis in the curriculum on interdisciplinary convergence in modern biology, engineering and technology, applied orientation, quantitative approach, practical training, awareness of the broader social, economic, environmental, ethical, legal and managerial issues in biotechnology. Some of the distinguishing features of the School include highly qualified faculty, in-house teaching, quality laboratory infrastructure for teaching and research, individual projects, good library, etc.

School of Biotechnology, SMVDU offers students the ability to learn, advance and succeed in this exciting field with a variety of learning opportunities designed to meet the needs of working adults.

#### **Objectives**

- To provide impetus to the activity of knowledge acquisition and education of students in basic sciences and technological know-how associated with the field of biotechnology, and other relevant areas
- To focus our teaching and research activities strategically around national economic goals.
- To facilitate comprehensive learning combining the scientific, technological and social aspects
- To seek new models of collaboration with other institutes, universities and industries.
- To combine academic study and the thrill of innovation

#### A. List of research projects sponsored by the government/ non-government agencies: -

S.	No.	Title of the project (PI/CoPI)	Funding agency	Amount sanctioned (In Lakhs)	Status/Dur ation
	1.	Centre for Advance Research (CAR) entitled 'To restraint or regulate the reproductive health issues of human from J&K'	Indian Council of Medical Research (ICMR).	10 Crore	On going
	2.	Establishment of Bioinformatics Infrastructure (BIF) for the promotion of Biology Teaching	Apex Bioinformatics Centre, Dept.	97.11	Ongoing 2013-2017 2017-2020

	through Bioinformatics (Prof. V. Verma, Coordinator)	of Biotechnology, New Delhi		
3.	Molecular characterization of non- small cell lung carcinoma in patients from Jammu and Kashmir (Dr. Rakesh Kumar, PI)	DST-SSTP Grant	90.01	Ongoing 2017-2020
4.	Targeting synthetic lethality interaction among genome stability and protein degradation pathways mediated by SCF-E3 ligase component F box proteins for personalized drug development (Dr. Narendra Bairwa, PI)	Department of Biotechnology, Govt. of India	82	Ongoing 2013-2018
5.	Identification of unique and novel alleles of thermo stable and cold active lipases and cellulases from microflora of J&K State using metagenomic approach against J&K Special Call (Dr. V. Verma, PI/Dr. ShafaqRasool, Co-PI)	Department of Biotechnology, Govt. of India	49.56	Ongoing 2015-2018
6.	Engineering of the Insulin-producing pro-biotic yeast <i>Saccharomyces boulardii</i> and exploration of its applications as therapeutics for diabetes (Dr. Narendra Bairwa, PI)	SERB-DST, Govt. of India	47.0	Ongoing 2017-2020
7.	Genetic Diversity and Evolutionary Perspectives in Population Groups of Jammu and Kashmir, India (Dr. Swarkar Sharma, PI)	National Geographic Society, USA	~30 (USD 50,000)	Ongoing/20 14-2018
8.	Exploring the potential of probiotic bacteria as a potential source of phytate degrading enzymes and bacteriocin production (Dr. Preeti Sharma, PI/ Mr. Parvez S. Slathia, CoPI,)	Department of Biotechnology, Govt. of India	37.09	Ongoing 2014-2018
9.	Genetic Perspectives of Type 2 Diabetes Susceptibility in Population Group of Jammu and Kashmir, India (Dr. Swarkar Sharma, PI)	Department of Science and Technology, SERB	27.0	Ongoing 2014-2017
10.	Genetic perspective of DNA Damage in breast cancer (Dr. Rakesh Kumar, PI)	Department of Science & Technology, SERB, Govt. of India	24.90	Ongoing 2015-2018

	Bioactive Molecules from endophytic Microorganisms Dr. V.	University Grants	15.4	Ongoing
11.	Verma, PI/Dr. ShafaqRasool, Co-PI)	Commission,	13.9	2015-2018
	Verma, Fiy Br. Sharaqikasool, eo Fiy	Govt. of India	13.3	2013 2010
	To Study Synergistic Effect of Dietary	University		
	Molecules/ Nutraceutical(s) in	Grants		Ongoing
12.	Combination with Clinically	Commission,	14.05	Ongoing 2015-2018
	Validated Cancer Chemotherapeutic	Govt. of India		2013-2016
	Agents (Dr. Samantha Vaishnavi, PI)			
	Human Genetic Diversity and	University		
13.	Evolutionary Perspectives of Type 2	Grants	6.0	Ongoing
15.	Diabetes Susceptibility in Indian	Commission,	0.0	2014-2016
	Populations (Dr. Swarkar Sharma, PI)	Govt. of India		
	Exploring Myxobacteria from the	Department of		
14.	state of Jammu and Kashmir for	Science &	19.63	Completed
	novel enzymes and secondary	Technology,	13.00	2010-2013
	metabolism (Dr. ShafaqRasool, PI)	Govt. of India		
	Strengthening of Botanical Garden	Ministry of		
15.	(Dr. Dheeraj Vyas, PI)	Environment	13	Completed
		and Forest,		2007-2008
		GOI		
	Establishment of Herbal Garden	National		
	Trikuta Hills at SMVDU University	Medicinal		
	(Dr. Sharada M. Potukuchi, PI)	Plants Board,		
16.		Ministry of	10	Completed
		Health &	_	2007-2010
		Family		
		Welfare, GOI		
	Formantative production of lactic	New Delhi.		
17.	Fermentative production of lactic acid from Mahua flowers (Prof. V.	TRIFED, New Delhi	14.95	Completed
17.	Verma, PI)	Delliii	14.93	2007-2009
	Development of DNA fingerprints in	Dabur India		
18.	selected medicinal plants	Limited,	5.0	Completed
	(Prof. V. Verma, PI)	Ghaziabad	- · <del>-</del>	2007-2010
	Organocatalytic asymmetric	University		
	Mannich/Intramolecular cyclization	Grants		
	as formal [3+2] cycloaddtion: One-	Commission,	2.2	Completed
19.	pot synthesis of substituted	Govt. of India	9.0	2011-2014
	pyrrolidine ring systems (Dr. Anil			
	Kumar, PI)			
	DST Special Package for J&K (Prof. V.	Department of		
20.	Verma, Coordinator)	Science &	97.4	Completed
20.		Technology,	J1.4	/2009-2014
		Govt. of India		

		TOTAL GRANTS		& Ongoing)
	,	I	966	5.88
28.	Property Rights (Dr. Rakesh Kumar, PI)	(Workshop)	1.0	2017
	Scientific Innovation and Intellectual	DST-JK		
27.	Replication and characterization of newly identified T2D susceptible genetic loci in Some Indian Population Groups (Dr. Ekta Rai, PI)	University Grants Commission, Govt. of India	6.0	Completed 2014-2016
26.	Molecular modeling and drug docking studies on Cystathionine beta lyase in selected members of Enterobacteriaceae (Mr. Parvez S. Slathia, PI, Dr. Preeti Sharma, CoPI)	University Grants Commission, Govt. of India	1.60	Completed 2012-2014
25.	Cell and tissue engineering of <i>in vitro</i> cultures of <i>Bacopamonnieri</i> (L.) (Dr. Sharada M. Potukuchi, PI)	University Grants Commission, Govt. of India	13.71	Completed 2012-2015
24.	mi RNA Status in Breast Tumors and therapeutic Potential (Prof. R.N.K.Bamezai, PI, Dr. Rakesh Kumar, CoPI)	J&K State DST, J&K	150.0	Completed 2012-2015
23.	Exploring Microbial Diversity & Mining Novel Hydrolases from Brackish Water Lakes of Ladakh Region by Metagenomic Approach (Dr. ShafaqRasool, PI)	Council of Scientific and Industrial Research, Govt. of India	34.0	Completed 2012-2015
22.	UGC SAP DRS-I Additional Grant (Prof. V. Verma Coordinator, Dr. Sharada M. Potukuchi, Dy. Coordinator)	University Grants Commission, GOI	20.0	Completed 2011-2016
21.	UGC SAP DRS-I (Prof. V. VermaCoordinator, Dr. Sharada M. Potukuchi, Dy. Coordinator)	University Grants Commission, GOI	64.75	Completed 2011-2016

# **B.** Faculty Research Consultancy Expertise/ Specialization:

S.No.	Faculty	Area of expertise	Research/ Consultancy
			Capabilities/ Specialization
1.	Prof. V. Verma	Prof., Head, SoBT& Dean,	Plant Cytogenetics &
		FoE	Molecular biology
2.	Dr. Sharada M.	Associate Prof. & Academic	Plant Tissue Culture & Genetic
	Potukuchi	Coordinator, SoBT	Engineering
3.	Dr. Ratna Chandra	Assistant Prof.	Plant Genetic Engineering,

			BtTransgenics
4.	Dr. Anil Kumar	Assistant Prof.	Organic Chemistry
5.	Dr. Preeti Sharma	Assistant Prof.	Microbial Biotechnology &
			Environmental Science
6.	Dr. Samantha	Assistant Prof.	Plant Molecular Biology and
	Vaishnavi		Genetics
7.	Dr. ShafaqRasool	Assistant Prof.	Biotechnology
8.	Mr. Parvez S. Slathia	Assistant Prof.	Bioinformatics &
			Biotechnology
9.	Mr. Arvind Yadav	Assistant Prof.	Biochemical Engineering
10.	Dr. InduBushan	Assistant Prof.	Biochemistry &
			Biotransformation
11.	Dr. Raju Shankarayan	Assistant Prof.	Biochemical Engineering &
			Biotechnology
12.	Dr. Vinod Singh	Assistant Prof.	Immunology
13.	Dr. Swarkar Sharma	Assistant Prof.	Genetics and Genomics of
			Human Disorders, Next
			Generation Sequencing
14.	Dr. Ekta Rai	Assistant Prof.	Molecular Genetics of Human
			Disorders, Diabetes
15.	Dr. Rakesh Kumar	Assistant Prof.	Cancer Biology
			DNA Damage Response
16.	Dr. NarenderBairwa	Assistant Prof.	Biotechnology & Genetics

# C. List of equipments available in School for Research & Consultancy:

S. No.	Name of Lab	Name of the Lab Equipment	Qty	Company
1.		HP Scanner G 4010	01	НР
		Sun Servers for BIF		M/s DM System
		i) High End Server	01	
		ii) Work Station	03	
2.		Bio box software		Neatgear, Linksys -
		Switch Ethernet	01	
	Bioinformati	Warrant enhancement for		
	cs Lab, A-	X2200 M2 & Ultra 20 M2		
3.	101, Block A	Photocopier	01	Cannon
4	BIF Lab	Dell Desktop Optiplex 330	06	Dell
4.		computer		
5.		HP Compaq Desktop	07	HP
5.		computer		
6		Dell Desktop Computer	05	Dell
7.		5 KVA ONLINE UPS	02	APC, Company
8.		Ethernet switch	01	Digisol
9.		Interactive Board	01	HCL

10.		Analytical Balance	01	Denver Instrument
11	1	Glass Bead Sterilizer	01	Shimas Innovative
11.				System
4.0		Automatic Electronic Ignition	01	Genix Biotech Asia Pvt.
12.		Gas Burner		Ltd.
13.		Refrigerator Twin door (335	01	LG
	<u> </u> <del> </del>	Lt)	01	1.0
14.		Refrigerator Twin door (422Lt)	01	LG
15.		Hot Air Oven	01	Accumax India
16.	Tissue Culture	Microwave Oven	01	Samsung
17.	Lab, A-107, Block A	HPLC (High Pressure Liquid chromatography)	01No.	Hitachi
18.		Laminar Air Flow (Horizontal)	01	Khera Instruments
19.	-	Incubator Shaker	01	Khera Instruments
20.	_	Tissue Culture Rack	02	Khera instruments
21.	-	Tissue Culture Rack	02	Vista Biocell
22.	-	Hot Plate Single Top Heating	01	Macro Scientific
23.	_	Orbital Shaker	01	Khera instruments
24.	-	Table top Shaker	01	KheraInstrumnents
25.	-	Voltage Stabilizer (3KVA)	01	Local make
26.	-	Digital Camera	01	Sony
27.	-	Cyber Shot Camera	01	Sony
28.		Vaccum Pump	02	Perfit
-0.			-	Reviera
	-	Midi-submarine	02	Bangalore Genei
29.		electrophoresis system	-	2484.6.6.6.6.16.
30.	-	Electrophoresis power supply	01	Biomatrix Technologies
30.	-	Servo Stabilizer 4 KVA	01	Autoronica
31.		Rocker Platform	02	Bangalore Genei
32.	Molecular	Hand Held Gas Operated Ampoule Sealing Torch	01	Biomedia Laboratories, New Delhi
33.	Biology Lab, A- 104, Block A	Gas Cylinders for Sealing  Torch	02	-
	, = , = = = = = = = = = = = = = = = = =	Vertical Slab Midi Gel	02	Khera Instruments Pvt.
		Electrophoresis System	-	Ltd., New Delhi
34.		with High Voltage Power	01	
	-	Supply		
35.		Horizontal Laminar Flow Bench	01	Khera Instruments Pvt. Ltd., Delhi
36.		Magnetic Stirrer with Hot Plate	02	Tarsons
37.	1	Ultra Pure Water Purifier	01	Millipore
57.	<u> </u>	Ollia Fule Water Fulfilel	01	iviiiipore

	System		
38.	Vortex Mixer	02	Biolinkk
20	Rotor A-2 MTP, Make	01	-
39.	Eppendrof		
40	Rotor F-35-630, Make	01	-
40.	Eppendrof		
41	Fast Protein Liquid	01	Wipro GE Healthcare,
41.	Chromatography System		Chandigarh
42	Fireboy Plus Electronic	02	Biomedia Laboratories,
42.	Bunsen Burner		New Delhi
	UV Hand Held Torch with	01	Genetix
43.	Dual Wavelength and UV		
	Safety Glasses		
44.	Microwave Oven	01	LG, Capacity 34 Ltrs.
	JULABO Microprocessor	01	Siskin Instruments Co.
45.	Based Refrigerated and		(P) Ltd., New Delhi
	Heating Circulator		
46.	-20 <sup>0</sup> C Deep Freezer	01	Vest Frost
	NBS Refrigerated Incubator	01	Innova 42R, M/s New
47.	Shaker		Brunswich, USA, M/s.
47.			Eppendrof India Ltd.,
			New Delhi
48.	Electroporator	01	Eppendrof India Ltd.,
40.			New Delhi
49.	Thermocycler (MJ Mini 48	01	Bio-Rad Pacific Ltd.,
45.	well)		USA
50.	Gel Documentation System	01	Bio-Rad Pacific Ltd.,
50.			USA
51.	Double Beam UV VIS	01	Labindia Instruments
<u>J1.</u>	Spectrophotometer		Pvt. Ltd., Mumbai
52.	Boiling Water Bath with	01	Perfit
JZ.	Thermostat (Rectangular)		
	Single Distillation Unit with	01	D.S. Enterprises,
53.	automatic cut off, Capacity-		Jammu
	10lit. LABCO make		
54.	Refrigerator	01	LG
55.	Hot Air Oven	01	Narang Scientific Works
			Pvt. Ltd., New Delhi
56.	pH Meter	01	Metler Toledo
57.	Ultrasonic Cleaner with degas	01	Cole Parmer
	Features		
58.	Gel Electrophoresis System &	01	GE Healthcare
	its accessories		Biosciences Ltd
59.	Precision Electronic Balance	01	Shimadzu
	(BL220H)		

60		Electrophoresis Power Supply	01	Genei Merck
61.		Microcentrifuge (spinwin MC- 02)	01	Tarsons
62.		Digital Camera (DSC-HX100)	01	Sony
		Vertical Gel Electrophorosis	01	CBS Scietific, Imperials
63.		system		Life sciences
6.4		Midi submarine	01	Genei Merck
64.		Electrophorosis System		
66		Shaking Water Bath	01	DaihanLabtech India
66.				Pvt. Ltd., Hyderabad
67.	Molecular	Master Cycler Gradient	01	Eppendroff India
60	Biology Lab, A-	High Speed Refrigerated	01	Sigma Laborzentrifugen
68.	104, Block A	Centrifuge		
69.		Gas Liquid Chromatograph	01	Nucon
70.	]	Microbial Fermentor	01	Sartorius
71.	]	Incubator Shaker	02	New Brunscik
72.		Deep Freezer -80	01	New Brunscik
73.		Weighing balance	01	And company
74.	1	Microscope	05	Olympus
75.	Microbiology	Centrifuge	01	Sigma
76.	Lab, A-103,	Water bath shaker	01	Labtech
77.	Block A	Laminar Air flow	01	Thermodyname
78		pH meter	01	Mettler Toledo
79.		Lyophilizer (Freeze Dryer)	01	Diahan Lab Tech
80.		Refrigerator	01	LG
04		Homogenizer Daihan Model	01	Biogene Scientific
81.		No-15A		
82.		Heating Mantle	02	ABC
		Mass Array Compact System	01	Sequenom/Aceprobe
		along with accessories:		Technologies
		a) Mastercycler		a) PRO384,
83.		b) Centrifuge with rotor A-2		b) 5430, Eppendroff
65.		MTP		c) Spinwin MC-00
		c) Microcentrifuge		d) SO 100-230V-VX-100
	Mass Array	d) Mini Lab Roller		e) APC
	Mass Array	e) Online UPS with 32 Battery		
84.	Lab - I, A- 105, Block A	RT PCR	01	Agilent Stratagene
	BIOCK A			Mx3005
85.		Bioanalyzer	01	Agilent
86.	]	Vortex Mixer	01	IKA MS3 Vortexer
87.		Centrifuge	01	ThermoscientificBiofug
37.				e primo R
88.		Centrifuge	01	Eppendroff 5418
89.		Water bath	01	Julabo F25

90.		Vortex mixer	01	Labnet
91.	-	Minispin	01	Eppendroff
92.	-	CO <sub>2</sub> Incubator	01	New Brunswick
93.	-	CO <sub>2</sub> Incubator	01	Ectanav
94.	1	Spinwin	01	Tarson MC-00
95.	-	Refrigerator -20	01	Vestfrost
96.	1	Refrigerator 4	01	LG
97.		Master Cycler	01	Eppendroff
98.	1	Biospectrometer	01	Eppendroff
99.	1	Gel Doc EZ Imager	01	BioRad
	-	Electrophoresis Unit with	01	BioRad
100.		power supply	01	Bionad
	-	Electrophoresis Unit with	01	_
101.		power supply	01	
102.	Mass Array	Test Tube Shaker	01	Vortex Shaker
103	Lab - II, A- 105,	Mix Mate	01	Eppendroff
	Block A	Hot Plate	01	COD Digestion
104.			<b>V</b> -	Apparatus
105.	1	Water Bath	01	Serological
	-	Ultra Low Temperature	01	New Brunswick U410
106.		Freezer	-	premium
107.	-	Hot Air Oven	01	Universal
108.	-	Autoclave	01	Biotechnologies
109.		Heating Mantle 250 ml	03	Labco
	1	Melting Point Apparatus	01	Analab Scientific
110.				Instruments Pvt. Ltd.
111	1	Distillation Unit 5000 ml	01	Khera
442		High Precision Water Bath		
112.		with Stirrer	01	Yorko
113.		Vacuum Pump	01	Perfit
114.		Water Bath 6 holes	02	Perfit
115.	1	Rotary Vacuum Evaporator	01	Perfit
116	Chemistry Lab	Magnetic Stirrer with Hot		
116.	I & II, COS-104	Plate	02	Perfit
117.	& 106, COS	pH Meter	02	Mettler Toledo, Deluxe
118.	Building	UV-Cabinet	01	Labco
119.		Flash Chromatography,	01	Biotage
120.		Refrigerator	01	Videocon
121.		Digital Weighing Balance	01	Shimadzu
122		Magnetic Stirrer with Hot		
122.		Plate	04	IKA
123.		Hot Air Oven	01	Accumax India
124.		UV Cabinet	01	VidyaUdyog
125.		Vacuum pump	01	Buchi

126.		Water Jet Pump	01	JET-VAC
127.		Vacuum Pump	01	HHV
		Oil Bath with Magnetic Stirrer		Ganesh Scientific
128.		250 ml	01	Industries
400		Oil Bath with Magnetic Stirrer		Ganesh Scientific
129.		500 ml	01	Industries
130.		Heating Mantle 250 ml	01	Perfit
131.		Oil Bath cum Magnetic stirrer	01	Raaga Industries
132.		Fumehood	01	-
400		Binocular Microscopes	04	Olympus
133.		(Model H-i20)		
134.		Water bath (Round)	01	Perfit
425		Water bath (round)	01	Perfit
135.	Microbiology	250x150mm Brass		
136.	Lab, COS-203,	Dancing Shaker	01	Tarsons
137.	COS Building	BOD Incubator	01	PCI Analytics
138.		Fumehood	01	-
139.		Refrigerator (Double Door)	01	Videocon
140.		Heating mantle ( 5 litre)	02	Perfit
141.		Refrigerator (Double Door)	01	Videocon
142.		Weighing Balance	01	AVON
143.	Molecular	Micro Centrifuge	01	Spinwin
144.	Biology Lab,	Shaking Incubator	01	Labtech
145.	COS-205, COS	Dessicator	01	-
146.	Building	LPG Cylinder	01	Indane
147.		Microscope	01	Olympus
148.		Heating Mantel	01	-
149.		Vertical Autoclave	01	Biogen
150.	Autoclave &	Pressure Cooker	01	Hawkins
151.	Media Room,	LPG Cylinder	01	Indane
152.	COS Building	Gas Stove (Single Burner)	01	In Alsa
153.		Fire Extinguisher	01	-
154.		Spinwinmicrocentrifuge	01	Tarsons
155		Spinot Magnetic stitrrer cum	01	Tarsons
155.		hot plate		
156.		Mini Dual Vertical	01	Tarsons
130.	Riotochnolog:	Electrophoresis Unit		
	Biotechnology Lab, COS-201,	Midi submarine	01	Tarsons
157.	COS Building	electrophoresis unit with		
	LOS Building	accessories		
		Mini submarine	01	Tarsons
158.		electrophoresis unit with		
		accessories		
159.		Electrophoresis power supply	02	Tarsons

		unit		
160.		Spinit magnetic stirrer- motorless	01	Tarsons
161.		Heater	01	Local make
162.		BOD incubator	01	Khera Instruments
163.		Digital spectrophotometer	01	Electronics India Ltd.
164.		Refrigerator	01	Videocon (Prashast Electronics, Jammu)
165.		pH meter (model 6500)	01	Merck (Eutech Instruments)
166.		Water Bath	01	Perfit India (Gupta Scientific Industries)
167		Heating mantle (10 litre)	01	Labco India (D. S. Enterprises)
168.		Deep freezer (-20°C)	01	Vestfrost (Hindustan Trading and Technologies Worldwide)
169.		PCR (Mastercycler)	01	Eppendorf India Ltd.
170.		Midi submarine Gel electrophoresis unit with accessories	01	Medox
171.		Vertical slab dual mini electrophoresis (PAGE)	01	Medox
172.		Electrophoresis power supply	01	Medox
173.		Water bath 12 holes	01	Perfit
174.		Heating mantle 100 ml	06	Perfit
175.	DoBT Store,	Heating mantle 250 ml	06	Labco
176.	COS-202, COS	Heating mantle 500 ml	05	Labco
177.	Building	LPG Cylinders Need to be returned to the supplier	16	HP
178.	_	LPG Cylinders	06	Indane

# D. List of Software available for in School for Research & Consultancy:

S.No.	Name of Software	Details	Project No.
1	PyMOL,	Protein 3d structure Visualization	PR-15
		tool	
2	Desmond Molecular	All atom classical molecular	PR-15
	Dynamics Tool	dynamics simulations software	
3	Virtual Molecular	Visualization and analysis of	PR-15
	Dynamics	molecular dynamics simulation	
		trajectories	
4	Autodock	Protein drug docking	PR-15
5	PyRx	High throughput protein drug	PR-15

		docking	
6	R studio	Data mining and plotting	PR-15
7	DNA STAR	Analysis of DNA sequencing results	PR-15

# E. Details of testing facilities available in the School

S.No.	Name of facility	Details	Project No.
1.	Water Testing	Biochemical Analysis	Nil

### F. MOUs

Name of the institution/ industry/ corporate house	Year of signing MoU	Duration	List the actual activities under each MoU year wise	Number of students/teachers participated under MoUs
MoU between SMVDU &Vaishnavi Bio- Tech Ltd.	2014	5 years	Placement and training related activities	Placement of students of B. Tech. (IBT) 3 students placed
MoU between SMVDU &Prathista Industries Ltd.	2014	6 years	Visit of students and Faculty of SoBT for 2 weeks Training Program at Prathishtha Industries Ltd., Hyderabad	O3 (Dr. SharadaPotukuchi, Mr. ParvezSlathia, Mr. Arvind Yadav) 43 [Students of B. Tech. Final Year (13) + Students of M. Sc. Final year (30)] All the students successfully completed their allotted projects within the stipulated time period of 15 days and worked on different topics like: Fermentative production of calcium propionate by using Propionibacteria freudenrench ii, Industrial Production of calcium gluconate with simultaneous production of glucose oxidase and catalase by using Aspergillus niger, Conversion of fermentable sugars from lignocelluloses by Aspergillus niger, Production of Phytase from Aspergillus niger, Enhancement of vitamin B <sub>12</sub> yield through fermentation, Conversion of proteins into amino acids by enzymatic process, Glycine

MoU between SMVDU & SKUAST-J	2014	3 years	Visit of Students and Faculty from both the Institutes	production from soyabean hydrolysates, Fermentative production of yeast powder and glutamic acid and Production of probiotics from <i>Lactobacillus</i> . It was a good learning experience for all of the students to work at Prathistha Industries Limited (PIL), Hyderabad.  Prof. Verma, Dr. SharadaPotukuchi DElivered Lectures, as Expert for Practical Exam, Dissertation Via, Ph.
MoU between SMVDU & IIIM-J	2015	3 years	Visit of Students and Faculty from both the Institutes Joint Students for Ph. D., Research work, Projects, etc.	D. Viva voce, etc.  Every year the Third year B. Tech. (BT) and First year M. Sc. (BT) students are taken to IIIM, J for demonstration of experiments in Cell Culture (Plant & Animal) and Instrumentation facility Students undertake Summer Projects (2 months) and Final Semester Major Project (4 months) at IIIM, J.
MoU between SMVDU &Prathista Industries Ltd.&Universite Laval	2008	5 years	Visit of Faculty to University of Laval	Prof. V. Verma visited the University and held meetings for collaboration on various joint research projects.
MoU between SMVDU &Thapar University, Patiala	2009	5 years	For facilitation of M. Sc. (Biotechnology) Admission	Visited by Prof. V. Verma several times. The List of Candidates appearing in the M. Sc. (Biotechnology) Admission Test conducted by thaparUniv. was shared with SMVDU, for selection of Merit score of aspiring students.
MOU between Laval University, Canada, SMVDU and Patishtha Industries	2008	5 years	Visit of Faculty to University of Laval	Prof. V. Verma visited the University and held meetings for collaboration on various joint research projects.

#### G. List of Research projects submitted to funding agency:

- I. Research Project Proposal entitled 'Genetic Characterization of Autism Spectrum Disorders (ASD) to SERB-DST (Dr. Rakesh Kumar)
- II. Research Project Proposal entitled "Preparation of Heparin Oligosaccharides Using Immobilized Heparinase Bioreactor" to SERB-DST (Dr. InduBushan)
- III. Research Project Proposal entitled 'Genetic Effect of Telomere Shortening on Cardiomyopathy' to SERB-DST (Dr. Rakesh Kumar)
- IV. Research Project Proposal entitled 'Therapeutic interaction of PARP and telomerase inhibitors: Role in cancer treatment' to DBT (Welcome DBT-Intermediate Fellowship) (Dr. Rakesh Kumar).
- v. Research Project Proposal entitled 'Cancer genome analysis of patients from North and North-East India' to DBT, GOI (Dr. Rakesh Kumar).
- VI. Research Project Proposal entitled 'Genetic factors and its association with risk of oral carcinoma in North India' to WOS-B, DST (Dr. Rakesh Kumar).
- VII. Research Project Proposal entitled "Genetic factors and its association with risk of metabolic syndrome and hepatocellular carcinoma in North India" to WOS-B DST, Govt. of India (Dr. Rakesh Kumar).
- VIII. Research Project Proposal entitled 'Validation of biochemical studies, development of regeneration strategies for conservation of medicinally important plant KickxiaRamosissima' to SERB-DST) Dr. Sharada M. Potukuchi).
- IX. Research Project Proposal entitled 'Functional analysis of cancer related F-box motif encoding genes and SNP variations using CRISPER-Cas9 technology and heterologous expression in S.cervisiae' to DBT, GoI (Dr. Narendra K Bairwa).
- x. Research Project Proposal entitled 'Association of Genetic factors with risk of metabolic syndrome and hepatocellular carcinoma in north and northeast India-A comparative study' to DBT, GoI(Dr. Rakesh Kumar).
- XI. Research Project Proposal entitled 'Exploration of microflora from North Western Himalayas (Jammu & Kashmir) for isolation of novel heparinase' to SERB, DST, GOI (Dr. InduBhushan).
- XII. Research Project Proposal entitled 'Bioactive potential of endophytes from selected plants of Jammu province (J&K) in Himalayan region' to J&K State Council for Science and Technology (DST, J&K State, GoI) (Dr. InduBhushan).
- XIII. Research Project Proposal entitled 'Role of Inflammation Associated Genes Polymorphisms in Predisposition to Type 2 Diabetes and Type 2 Diabetes Associated Nephropathy Complication in North-West Population of India' to DST-SERB, GoI (Dr. Vinod Singh).
- XIV. Research project entitled 'Isolation and Identification of navel metabolites from endophytic microorganisms of selected medicinal plants' to SERB (Dr. Shardha M. Potukuchi).
- xv. Research project entitled 'Radio and chemo targeting of HSP genes can induce programmed cell death in tumors' to BRNS-Govt. of India (Dr. Rakesh Kumar).
- XVI. Research project entitled 'Poly (ADP ribose) polymerase (PARP) in relation to human cancer

- through targeting the radio sensitizing effects to BRNS-Govt. of India (Dr. Rakesh Kumar).
- XVII. Research project entitled 'Molecular basis of Thalassemia in north India' to DBT- Govt. of India (Dr. Rakesh Kumar).
- XVIII. Research project entitled 'Advance molecular analysis in human infertility to DST- Govt. of India (Dr. Rakesh Kumar).

#### H. Centre at the School:

S.No.	Name of Centre	Coordinator	Facilities available
1.	*Centre for Advance	Dr. Rakesh Kumar-Pl	Recently Established
	Research (CAR)	Dr. Swarkar Sharma,	
		Co-PI	
2.	Bioinformatics	Prof. V. Verma	HP Scanner G 4010
	Infrastructural		Sun Servers for BIF
	Facilities		i) High End Server
			ii) Work Station
			Bio box software
			Switch Ethernet
			Warrant enhancement for X2200 M2
			& Ultra 20 M2
			Photocopier
			Dell Desktop Optiplex 330 computer
			HP Compaq Desktop computer
			Dell Desktop Computer
			5 KVA ONLINE UPS
			Ethernet switch
			Interactive Board

#### I. Research

FY	Journal papers		Number of FDP organized	Number of other events (Conference/Workshop/Se minar etc.)		
2018-17	22	0	0	4		
2017-16	23	0	0	4		
2016-15	16	1	0	2		
2015-14	23	0	0	3		
2014-13	15	0	0	3		

# ICMR Center for Advance Research(CAR), SMVDU, Katra "To Address & Promote Human Reproductive Health inJammu and Kashmir Region"

(A multi institutional Project for the State of Jammu and Kashmir)

For the first time in the history of Jammu and Kashmir, four of its Universities have been sanctioned a major research funding to the tune of Rs. 9.1crores to establish a Multi-institutional Centre for Advance Research (CAR) in Human Reproductive health by the **Indian Council of Medical Research** 

(ICMR), the apex body for the formulation, coordination and promotion of biomedical research in India. The participating Universities include; Shri Mata Vaishno Devi University, Katra, University of Jammu, Central University of Jammu and University of Kashmir. The Lead Investigators of the Centre include, Dr. Rakesh Kumar from School of Biotechnology, SMVDU; Professor Manoj Dhar, School of Biotechnology & Institute of Human Genetics (presently Vice Chancellor), University of Jammu; Dr. Audesh Kumar from Centre of Molecular Biology, Central University of Jammu and Professor RaiesQadri, Department of Biotechnology, University of Kashmir. Dr. Swarkar Sharma of School of Biotechnology, SMVDU Katra and Dr. Sanjana Kaul from School of Biotechnology, University of Jammu are co-investigators in their respective centres.

SMVDU has been nominated as the Nodal centre, with Dr. Rakesh Kumar as the co-ordinator of the and all other centres will be designated as Sub-Centres.

A detailed understanding of health challenges, especially in the area of Reproductive Health, need addressed within the state of J&K to ensure that policies implemented in the area receive approximately response and result in a fruitful outcome. Incidentally, there is no concrete researched data available public or medical database regarding the incidence of infertility or birth defects in the population Jammu and Kashmir.

There is no published data from Jammu region.

The center has following objectives:

- Training and skill development: Human Resource Development.
- Encouraging Inter-Institutional Collaboration: Development of regional networks.
- **Education and Awareness: Data Collection and Compilation.**
- To access and evaluate the incidence and prevalence of Reproductive health disorders/disesthe state of Jammu and Kashmir.
- Genetic analysis of the recruited subjects.

The Institute will be recognized as a ICMR Centre of Advanced Research in Reproductive Health SMVDU, Katra "To Address & Promote Human Reproductive Health in Jammu and Kashmir Regi Research and Training in Reproductive Health, and also as a centre for Training in Diagnos Management of Infertility and spontaneous Abortions.

### J. Patents:

Sr. No.	Year	Reference number	Title	Inventors & co-inventors	Patent Authority	Filing status with Patent Authorit Y	Applica tion Status
1.	2017	20171103 3513	Electrical Conductivity Based Detection and Quantification of Presence of Proteins in Blood/Body Fluid Samples	Swarkar Sharma, Ekta Rai, Vinod Singh, Rakesh Jha, Sanjeev Jain	Indian Patent Office	Provision al Filed	Awaited
2.	2018	20181101 4220	Technical Modifications for a Cheaper Hyperthermic Intraperitoneal Chemotherapy (HIPEC) Device	Swarkar Sharma, Sandeep Koul (SMVDNSH)	Indian Patent Office	Provision al Filed	Awaited
3.	2018	20181104 1582	PCR TaqMan assay based Kit for Telomere length measurement	Swarkar Sharma, Itty Sethi, Ghulam Rasool, Ekta Rai	Indian Patent Office	Publishe d	Awaited
4.	2017	201711043 149	A Novel Strategy to Increase The Biogas Production.	Chetanya,Swa rkar Sharma, Durgesh Satyam	Indian Patent Office	Publishe d	Awaited
5.	2018	201811020 588	A Polymerase Chain Reaction (PCR) kit and process for making the same	Swarkar Sharma	Indian Patent Office	Publishe d	Awaited

Name of the School: School of Mathematics

Year of establishment: 2007

**Contact:** 01991-285524 (2504)

#### **Brief Profile of School:**

The School of Mathematics came into existence in 2007. At present, the School has 8 faculty members. Right from its inception the School has striven to set high standards of teaching and research. It has been the cherished goal of the School to inculcate in the students a desire to excel, to demonstrate originality and to develop a sense of responsibility towards the society. The School continuously reviews and monitors the curriculum of its academic programs as per demands of time.

For M.Sc program, various courses related to latest developments in mathematics, that include Optimization Techniques, Discrete Mathematics, Numerical Methods, Space Mechanics, Game Theory, Decision Theory are offered besides core courses like Algebra, Analysis, Topology, Differential Equations, Differential Geometry etc.

For Ph.D program, the School of Mathematics presents a wide spectrum of research interests ranging from very abstract to practical aspects. Active research is being pursued in the areas of Functional Analysis, Operator Theory, Algebra, Ring Theory, Topology, Statistical Inference & Sampling Theory and Queuing Theory.

The faculty members of the School of Mathematics are currently engaged in the research in the areas like Algebra, Topology, Functional Analysis, Operator Theory, Sequence Series and Summability Theory, Queuing Theory, Sampling Theory, Information Theory and Differential Geometry.

#### **Objectives of the School:**

- To provide education and training of excellent quality both at undergraduate and postgraduate levels.
- To ensure that the University achieves and maintains an international standing in both teaching and research.
- To promote study and research in new and emerging areas and encourage academic interaction of the faculty and students at national and international levels.
- To encourage close collaboration with industry and facilitate the application of research for commercial use and for the benefit of society.

#### **Programs offered by the School:**

Apart from providing support to Faculty of Engineering for B.Tech/ M.Tech./ MCA programmes, the Department offers the following programmes.

- M.Sc. (Mathematics) since 2007 with intake of 30 students each year.
- Ph.D

#### A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowments, chairs	Name of the principal investigator / co investigator	Name of the funding agency	Type (government/non- government)	Department of principal investigator/ co investigator	Year of award	Funds provided (INR in lakhs)	Durati on of the projec t
Transparency of skew	Dr. V. K. Bhat	Depart ment	Government	School of Mathematics	2010	10.29	3 years

polynomial rings over Noetherian rings		of Atomic Energy, Mumba i					
Associated prime ideals and minimal prime ideals of skew polynomial rings	Dr. V. K. Bhat	UGC	Government	School of Mathematics	2011	2.0	2 years
Ore Extensions over Noetherian rings	Dr. V. K. Bhat (Visiting Expert)	Kuwait Univers ity	Government	School of Mathematics	2015	6.5	3 years
Completely prime ideals of skew polynomial rings	Dr. V. K. Bhat	SERB, DST	Government	School of Mathematics	2017	4.43	3 years
A study of Orlicz sequence spaces and their operators	Dr. Kuldip Raj	CSIR	Government	School of Mathematics	01-04- 2018	20	3 Years
Transient solution of Markovian Queuing Models with Customer Impatience and Retention of Reneged Customers	Dr. Rakesh Kumar	UGC, New Delhi	Government	School of Mathematics	2015	9.89	3 years

**B.** Faculty Research Consultancy Expertise/ Specialization:

S.No.	Faculty	Area of expertise	Research/ Consultancy Capabilities
1.	Prof.(Dr.) V. K. Bhat	Ph.D.	Algebra
2.	Dr. A. K. Das	Ph.D.	Topology
3	Dr. UdayPratap Singh	Ph.D.	Image Processing
4	Dr. Kuldip Raj	Ph.D.	Operator theory

5	Dr. Sandeep Bhougal	Ph.D.	Sampling theory
6	Dr. Rakesh Kumar	Ph.D.	Operations Research
7	Dr. Sandeep Sharma	Ph.D.	Differential Geometry
8	Dr. Surender Singh	Ph.D.	Information theory

### C. List of Research projects submitted to funding agency

- 1. A study on variants of dense normality" Submitted to DST on 31<sup>st</sup> March 2018 for funding by Dr. A. K. Das.
- 2. Queuing Systems with Reverse Balking and Reneging with probability of Retention submitted to NBHM (2017) by Dr. Rakesh Kumar.
- 3. A new Family of estimators for estimating the population mean in the finite population in sample surveys to National Board for Higher Mathematics by Dr. Sandeep Bhougal.
- 4. A study of Geometry of some light like manifolds and hypersurfaces' submitted to National Board for Higher Mathematics, Mumbai by Dr. Sandeep Sharma.

#### D. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of other events (Conference/Workshop/Seminar etc.)
2018-17	37	-	-
2017-16	24	-	02
2016-15	29	-	01
2015-14	33	1	-
2014-13	48	1	-

Name of the School: School of Physics

Year of establishment: 2004

**Contact**: 01991-285524, Ext. 2505

#### **Brief Profile of School:**

#### <u>Introduction</u>

- Established in the year 2005-2006 as School of Applied Physics & Mathematics.
- Evolved as a separate full-fledged School in 2009 (School of Physics).
- School prepares the students to pursue a successful career in the field of physics and its
  applications in daily life.

#### **Objectives**

- To disseminate scientific knowledge to students and to shape the intellectual growth of the institution.
- To provide education and training of excellent quality both at undergraduate and postgraduate levels.
- To ensure that the University achieves and maintains an international standing in both teaching and research.
- To promote study and research in new and emerging areas and encourage academic interaction of the faculty and students at national and international levels.

#### **Programmes Offered**

- 1. Master of Science (M.Sc.) in Physics. Two year course with following three specializations
  - Condensed Matter Physics (CMP)
  - Electronics
  - Atomic and Molecular Physics (AMP)

#### 2. Doctor of Philosophy (Ph.D.) in Physics

- Condensed Matter Physics (Experimental)
- Atomic and Molecular Physics (Theoretical)

#### **Courses Offered to Other Departments**

- Engineering Physics (PHL 1012)
  - B. Tech. Ist year students

#### A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowments, chairs	Name of the principal investigat or/ co investigat or	Name of the funding agency	Type (government/ non- government)	Departme nt of principal investigat or/ co investigat or	Year of award	Funds provided (INR in lakhs)	Dura tion of the proje ct
Estimation of	Dr. S.K.	ISRO	Government	Physics	2017	Rs. 36.80	2017-

deformation and strain rate in Jammu & Kashmir and Himachal Pradesh Himalaya using IRNSS Geodesy."	Wanchoo (PI)					Lacs plus 12 receivers	20
Physics of earthquakes and delineation of Himalayan thrust faults"	Dr. S.K. Wanchoo (PI)	UGC	Government	Physics	2015	13.7 Lacs	2015- 18
"Earthquakes without frontiers (EWF)	Dr. S.K. Wanchoo (Indian Co-PI)	NERC, UK	UK Government	Physics	2015	GBP 25569	2015- 17
"Earthquake hazard evaluation in Jammu and Kashmir Himalaya and Western Indo- Gangetic Plains	Dr. S.K. Wanchoo (Indian PI)	UGC	Indo-UK Government (UGC-UK IERI)	Physics	2015	Rs. 17,81,400/-	2015- 16
Seismic structure, active faulting and ground motion evaluation in NW India	Dr. S.K. Wanchoo (Indian PI)	NERC, UK	UK Government	Physics	2014	GBP 18500.	2014- 15
Biological-Activity- Predictions, X-ray Structure Analysis and Molecular Interactions in Some Organic Compounds of Medicinal Importance	Dr. Kamni	UGC	Government	Physics	2015	Rs.6,03,000/-	2015- 18
Synthesis and study of electronic structure of transition metal doped and undoped Eu <sub>2</sub> O <sub>3</sub> thin films(PR-82)	Dr. Ram Prakash	UGC- DAE CSR, Indore	Government	Physics	2015	Rs. 8,83,410/	2015- 2019

B. List of major Consultancies taken by School

Name of the consultant	Name of consultancy project	Consulting/Sponsoring agency with contact details	Year	Revenue generated (INR in Lakhs)
Dr. YugalKhajuria	Jambu Zoo (Jagti, Jammu & Kashmir)	Department of Wildlife Protection, J&K	2018	

C. Faculty Research Consultancy Expertise/ Specialization:

S.No.	Faculty	Area of expertise	Research/ Consultancy Capabilities
1	Dr Ashok Kumar	Space Physics, Astronomy,	Space Physics, Astronomy,
	Sharma Head, SoP	seismology, Thin films	seismology, Thin films
2	Dr. S. K. Wanchoo	Geophysics, Material	Geophysics, Material
		Science/Electronics	Science/Electronics
3	Dr. YugalKhajuria	Atomic and Molecular	Atomic and Molecular Physics
		Physics	
4	Dr. Jitendra Sharma	Materials Science	Materials Science
5	Dr. Kamni	Materials Science/X-ray	Materials Science/X-ray
		Crystallography	Crystallography
6	Dr. Vivek K Singh	Laser and Spectroscopy	Laser and Spectroscopy
7	Mr. Pankaj Biswas	Electronics, Nanophosphors	Electronics, Nanophosphors
8	Dr. Ram Prakash	Materials Science	Materials Science
9	Dr. Onkar Nath Verma	Electronics and Experimental	Electronics and Experimental
		Condensed Matter Physics	Condensed Matter Physics
10	Dr. Surender Pratap	Theoretical Condensed	Theoretical Condensed Matter
	·	Matter Physics	Physics

D. List of equipments available in School for Research & Consultancy

S.No.	Name of Equipment	Details	Project No.
1	UV-Vis Spectrometer	To find the optical properties of the	
		material, to check the impurities in	PR-59
		the sample, electronic transition etc.	
2	Carry Eclipse	Excitation and Emission spectra,	
	SpectroFluoro Meter	Decay curve and impurities present	PR-51
		in the sample etc.	
3	Dynamic Light	Particle size distribution	University Fund
	Scattering Specrometer		Offiversity Furia
4	FTIR SHIMAOZU IR	Molecular structural information	University Fund
	Tracer – 100		Offiversity Fulla
5	Thermo gravimetric	Weight-loss information and thermal	University Fund
	Analizer	stability.	Offiversity Fulla

# E. List of Software available for in School for Research & Consultancy

S.No.	Name of Software	Details	Project No.
1	Q-Chem Software	Molecular Calculation	PR-88
2	Gaussian Software	Molecular Calculation	PR-67

### F. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of other events (Conference/Workshop/Seminar etc.)
2018-17	1	-	02
2017-16	12	-	02
2016-15	18	-	02
2015-14	23	-	01
2014-13	28	1	01

Name of the School: Computer Science and Engineering

Year of establishment: 2004

Contact: 01991 285524

### **Brief Profile of School: Computer Science & Engineering:**

The School of Computer Science & Engineering has been set up to impart training of the highest standards to the students, in the field of computers, thus preparing them to meet the exacting demands of the highly competitive global industrial market.

The School is currently focused on providing B.Tech. &M.Tech. programs which cover exhaustively the area of Computer Science & Engineering

A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowments, chairs	Name of the principal investigator / co investigator	Name of the funding agency	Type (government /non- government)	Department of principal investigator / co investigator	Year of award	Funds provided (INR in lakhs)	Dura tion of the proje ct
A Secure and QoS Oriented Routing Protocol for MANETS	Dr. Ajay Koul, PI	UGC	Government	Computer Science & Engineering	2012	7.68 Lakhs	3 years
Automatic monitoring of plants based on leaf segmentation	Dr. Abhishek Gupta	UGC	Government	Computer Science & Engineering	2018	10 Lakhs	2 Years

#### B. List of major Consultancies taken by School:

Name of the consultant	Name of consultancy project	Consulting/Sponsoring agency with contact details	Year	Revenue generated (INR in Lakhs)
SMVDU, SoCSE	National Mission on	IIT Mumbai	2015-16	64, 050
	Education through ICT			Rupees
	(NMEICT) Workshops			
SMVDU, SoCSE	National Mission on	IIT Mumbai	2014-15	1.28 Lakhs
	Education through ICT			Approx.
	(NMEICT) Workshops			
SMVDU, SoCSE	National Mission on	IIT Mumbai	2013-14	1.88 Lakhs
	Education through ICT			Approx.
	(NMEICT) Workshops			

## **C.** Faculty Research Consultancy Expertise/ Specialization:

S.No	Faculty	Area of expertise	Research/ Consultancy Capabilities
1	Dr. Manoj Gupta	Bioinformatics and Computational biology	Algorithms
2	Dr. Baij Nath Kaushik	Machine Learning, Soft Computing, Nature Inspired Algorithms	Biological Data Mining, Text Analytics with Machine Learning and Nature Algorithms
3	Dr. Ajay Koul	Adhoc Networks	Security in Adhoc Networks
4	Mr. Manoj Kumar	Database Systems, Computer Networks	Database management systems, Computer Networks
5	Dr. Naveen Gondhi	Computer Network Management & Expert System, Mobile Adhoc Network.	Computer Networking and communication, Web applications
6	Ms. Sonika Gupta	Operating Systems, Data structures	Operating Systems, Data structures
7	Dr. Sunanda Gupta	Data Structures	Computer Simulation & Queues, Data Structures, Object Oriented analysis.
8	Dr. Sakshi Arora	A Soft computing, cloud computing and virtualization	A Soft computing, cloud computing and virtualization
9	Mr. Sanjay Sharma	Computer Architecture, Java Technology, Network security	Computer Architecture, Java Technology, Network security
10	Ms. Pooja Sharma	Java Technologies & Operating Systems.	Java Technologies & Operating Systems
11	Mr. Deo Prakash	Computer Networks, Software Engineering	Computer Networks, Software Engineering
12	Mr. Anuj Mahajan	Software Engineering, Web Information Retrieval	Software Engineering, Web Information Retrieval
13	Mr. Sudesh Kumar	Computer Networks, Network Security.	Computer Networks, Network Security.
14	Dr. Abhishek Gupta	Medical Image Processing, Image Processing	Development of the automation algorithms

### D. List of Software available for in School for Research & Consultancy

S.No	Name of Software	Details	Project No.
1	Tetcos Netsim Revision V8	Network Analysis and modeling Software	
2	IBM Rational Rose	Software Engineering Modeling and testing software	
3	MatLab V 2018	To implement various algorithms related to machine learning, image processing etc.	

E. List of Research projects submitted to funding agency

S.no.	Title of the Project	Funding Agency	Duration	Name of Project PI/Co-PI
1	A model for the	National Mission on		Di Dr Manai Cunta
	prediction of land slide hazard in Indian Himalayan	National Mission on Himalayan Studies (NMHS), Uttarakhand	3 Years	PI: Dr. Manoj Gupta Co-PI: Dr. Abhishek Gupta and Dr. Baijnath Kaushik
	Region			
2	Machine Learning Classifiers for modeling and prediction of quality of water.	National Mission on Himalayan Studies (NMHS), Uttarakhand	3 Years	PI: Dr. Baijnath Kaushik Co-PI: Dr. Manoj Gupta

# F. Linkage with industry

Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Year of comme nceme nt	Duration	Nature of linkage	Name of the participant	Link of the relevant document
Adobe Experience	Adobe AEM Lab	2017	1 Year	Training and Placement	Adobe, Faculty and	S & P
Manager Software					students from SoCSE	

### G. Centre at the School

S.No	Name of	Coordinator	Facilities available
	Centre		
1.	Network	Mr. Sudesh Kumar,	<u>Platform</u>
	Centre	Assistant Professor,	6 Sun X 4100 servers
		SoCSE	1 Dell Blade Server
			<ul> <li>Network is backed by Layer 3 Core Switch from Cisco,</li> </ul>
			HP & Huawei, 135 Nos. Layer 2 distribution Switches,
			CISCO Pix Firewalls for Security, Central Authentication
			Gateway and Network Management System.
			<u>Facilities</u>
			Network services like DHCP, DNS, Proxy, Primary
			Domain controller, Windows Deployment Service
			Ethernet LAN bandwidth of 1 Gbps from National
			Knowledge Network (through NMEICT)
			FullyWi-Fi enabled campus with more than 300 Wi-Fi
			Access points
			Hub for NPTEL videos
			Automated Library Software 'E- Granthalya'

N 4		
IVIana	gement	system

- Virtualization services through Hyper-V Servers
- Application servers for Department of Mechanical Engineering, (AutoCAD, Ansys)
- Application servers for College of Management. (Prowess CMIE, Capitaline NEO, etc.)
- The Network Centre has signed a MoU with Google Inc. for providing the Cloud Based Services with over 30 gigabytes of storage, Google Docs, Google Calendar & Google Talk
- Over 15 online workshops had already been conducted through virtual Classroom facility under NMEICT using AVIEW and more to come
- Biometric Attendance
- Research Computing
- Website hosting services for university website, live webcast, network dump for software downloads, Vikalp, inspire, online student grievance and Redressal, National Case Study Conference website, Board of student publications, Student affairs council, Tech fest Titiksha, resurgence, Tatva, sport fest Sarang, software freedom day
- Computer Service/Repair

#### H. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of FDP organized	Number of other events (Conference/Workshop/ Seminar etc.)
2018-17	24	-	1	2
2017-16	11	-	-	3
2016-15	14	-	-	3
2015-14	17	-	-	1
2014-13	13	-	-	10

#### I. Patents

Name of the Patenter	co-inventors	Patent Number	Title of the patent	Application Status (submitted/Publishe d/under evaluation/Granted	Year of Award of patent
Dr.	Harish Kumar	14/994044	A method for	under evaluation	
Abhishek	Sardana, Om		automatic		
Gupta	Prakash		detection of		
	Kharbanda,		anatomical		
	VirenSardana		landmarks in		
			volumetric data		

Dr.	Harish Kumar	94/DEL/2015	A method for	Submitted	
Abhishek	Sardana, Om		automatic		
Gupta	Prakash		detection of		
	Kharbanda,		anatomical		
	VirenSardana		landmarks in		
			volumetric data		
Dr.	BalaChakravarthy	201711030803	A method for	Submitted	
Abhishek	Neelapu, Harish		automatic		
Gupta	Kumar Sardana,		volumetric		
	Om Prakash		segmentation of		
	Kharbanda,		human upper		
	VirenSardana,		respiratory tract		
	ShrikanthVasams				
	etti				

### J. Other significant achievement of the school

- More than 100 Publications in Journal and Conferences.
- Students have done internship at premier institutions like IISC, IITs, ISI Kolkata , BARC, DRDO , ISRO etc.
- Student of 2012 batch awarded fellowship to do six months project work on machine learning at JIST Japan
- Student of final year completed his summer internship in University of BRUNO, CZECH Republic.
- Faculty completed UGC projects and MHRD sponsored projects in collaboration with IIT Roorkee and IIT Kanpur
- MOU with IT industry like EMC and IBM, and institutions of national repute.
- Best paper awards to Faculty in national and international conferences.
- Faculty awarded young scientist award.

Name of the School: Electronics & Communication Engineering

Year of establishment: 2005

**Contact:** 

#### **Brief Profile of School:**

The field of electronics is the fastest growing and the most rapidly changing area of technology in the current times. Electronics has become the all-pervasive technology, which finds application in all spheres of engineering including computers, communication, defense, mechatronics, instrumentation, automation, robotics, artificial intelligence, computer networks, satellites, education etc. The use of electronics has brought about a drastic change in the way human civilization exists today.

The school is currently focused on providing B.Tech. &M.Tech. programs which cover exhaustively the area of Electronics & Communication Engineering:

A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowments, chairs	Name of the principal investigator / co investigator	Name of the funding agency	Type (government /non- government)	Department of principal investigator/ co investigator	Year of award	Funds provided (INR in lakhs)	Duratio n of the project
Active Radar Absorber based on Frequency Slective Surface Active Stealth Technology	Dr. K. R. Jha	DRDO	Government	-	2018	22.87	2yrs
Availability Utilization and digital document of Non-Timber Bioresources for sustainable Rural Livelihood and decision support system of the rural households in the Northwest Himalayas	-	NMHS	Government	Mr. Ashish Suri/Mr. S .B. Kotwal	2018	49	3 yrs
Development of Microbial fuel cell	Dr. Vipan Kakkar	UGC	Government	-	2012	4.47	3yrs

Design modification and analysis of effect of variable quantization on A* Prune, K- MCSP Algorithm for video compression	Dr. Amit K. Pandit	UGC	Government	-	2012	4.46	2yrs
Development of location techniques for two and three dimensional wireless sensor networks	Mr. S. B. Kotwal	UGC	Government	-	2012	1.20	2yrs
Design & Demonstration of a set of algorithm for High Reliability Wireless Data Acquisition & Control	Dr. Sumeet Gupta	ISRO	Government	-	2010	13.27	18 months

# **B.** Faculty Research Consultancy Expertise/ Specialization:

S.No.	Faculty	Area of expertise	Research /Consultancy Capabilities
1	Dr. Kumud Ranjan Jha	Microwave Antenna	Yes
2	Dr. A. K. Pandit	Imaging and Video Processing/ICT Applications	Yes
3	Dr. Sumeet Gupta	Networks & Embedded Systems Design	Yes
4	Dr. Vipan Kakkar	VLSI, Embedded Systems, Video Processing.	Yes
5	Prof. Pritampartha De	Adaptive Signal Processing with application to Wireless Communication	Yes
6	Dr. Manish Sabraj	Control System & digital Signal Processing, Digital communication, control system and signal processing	Yes
7	Dr. R. K. Jha	Wireless Communication, Network Security issues.	Yes
8	Dr. Vijay Kumar	Low Power VLSI Design, Process	Yes

	Sharma	Variation Aware Design	
9	Dr. Sachin K. Gupta	Wireless Networking, Computer	Yes
		Networks, Data Communications,	
		Systems Theory	
10	Dr. Purnima Hazra Semiconductor devices and circu		Yes
		Microelectronic and nanoelectronic	
		devices	

## C. List of equipments available in School for Research & Consultancy

S.No.	Name of Equipment		
1	VNA		
2	Anichoic Chamber		
3	Spectrum Analyzer		
4	Signal Generator		

## D. List of Software available for in School for Research & Consultancy

S.No	Name of Software	Details
1.	System Vue Software 5 User License	IoT Kit and Sensors
2.	MATLAB,CADFEKO,QUALNET, MEMSPRO,CST	
3.	MENTOR GRAPHICS SOFTWARE ( I )	
4.	MENTOR GRAPHICS SOFTWARE ( II )	
5.	COMSOL SOFTWARE	
6.	OPTISYSTEM 14	5 users
7.	CADENCE	
8.	MULTISIM	20 USERS
9.	Xilinx 9.1	PERPETUAL

### E. MOUs

Organization with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU	Duration	List the actual activities under each MoU year wise	Number of students/teacher s participated under MoUs
Jio	Comm. Lab	2016	Continuing	Course programme	-
				for students, training	
				for faculty	
FICE	5G IOT Lab	2017	3 year	Intership for B.Tech.	
				&M.Tech.h students,	Students :38
				workshops & Training	Faculty: 15
				programmes for faculty	
SCL	Semi Conductor	2017	Continuing	Industrial Visit of	No. of Students =70
	Laboratory (SCL),			Students in the	(Including B.Tech
	Chandigarh			Month of Feb, 2018	ECE &M.Tech ECE)
					2. No. teachers
					participated = 03

# F. Linkage with industry

Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Year of commen cement	Duration
Jio	Comm. Lab	2016	Continuing
FICE	5G IOT Lab	2017	
SCL	Microelectronic Lab	2017	Continuing

# G. Centre at the School

S.No.	Name of Centre	Coordinator	Facilities available
			Wireless Sensor Network
1.	CENIC	Head, SoECE	Modules, Workstation,
			Computer Systems

# H. Research

FY	Number of International Journal papers	Number of FDP organized	Number of other events (Conference/Workshop/Seminar etc.)
2018-17	75	1	-
2017-16	24	-	-
2016-15	24	-	-
2015-14	22	-	-
2014-13	13	-	1

## I. Patents

Sr. No.	Year	Reference number	Title	Inventors & co-inventors	Patent Authority	Filing status with Patent Authority	Applicati on Status
1	2017	20171103 3513	Electrical conductivity based detection and quantification of presence of proteins in blood/body fluid samples	Swarkar Sharma, Ekta Rai, Vinod Singh, Rakesh Jha, Sanjeev Jain	Indian Patent Office	Provisiona I Filed	Awaited
2	2018	20181101 0011	Zonal Based Green Algorithm for Enhancing Battery Lifetime of User	Rakesh Jha, Pimmy Gandotra, Sanjeev Jain	Indian Patent Office	Provisiona I Filed	Awaited

			Terminals				
3	2017	20171101 4816	Sector based architecture for device-to-device (D2D) communication	Rakesh Jha, Pimmi Gandotra, Sanjeev Jain	Indian Patent Office	Published	Awaited
4	2017	20171101 4817	System and method for reducing interference in a communication network	Rakesh Jha, Akhil Gupta	Indian Patent Office	Published	Awaited
5	2017	20171101 4818	Power optimization with low complexity using scaled beam forming approach	Rakesh Jha, Akhil Gupta	Indian Patent Office	Published	Awaited
6	2018	20181102 3546	General purpose M2M SIM module that enables 4G LTE based communication for internet enabled devices (IOT)	Abhishek Chauhan, Rishav Sharma, Sanchit Gupta	Indian Patent Office	Provisiona I Filed	Awaited
7	2018	20181103 8418	Region Based Algorithm (RBA) for Secure Harvesting in Ultra Dense Network	Rakesh Jha, Garima Chopra and Sanjeev Jain	Indian Patent Office	Provisiona I Filed	Awaited

# J. Other significant achievement of the school

- a) The Industrial Institutional Partnership in term of sponsored labs in the school.
- b) A Number of patents filed from school.
- c) MOU's with Intuitions' of National Importance and Reputed Industries.

Name of the School: School of Architecture & Landscape Design

Year of establishment: 2006

**Contact:** +91 1991-285634 (Extn: 2378, 2365)

hod.dald@smvdu.ac.in, rajeev.garg@smvdu.ac.in

#### **Brief Profile of School:**

The School of Architecture & Landscape Design (SoALD) started in 2006 with the first batch of 40 students. The first three years of the school were spent on shared basis in the buildings of other UG & PG schools of the University. Meanwhile, SoALD faculty members consider themselves fortunate to have got the job of designing the school building under the leadership of First Director of the School Prof.C.L.Razdan. the beautiful design of the building with passionate learning environment was soon ready on paper & the building was ultimately inaugurated on 4th Dec, 2009 by the Chancellor SMVDU & Hon'ble Governor of J&K Sh. N. N. Vohra in presence of First lady of J&K Smt. Usha Vohra, then Vice-Chancellor SMVDU Prof. N. K. Bansal, then Director SoALDProf.C.L.Razdan& faculty members of school.

So far 07 batches have passed out after underwent studies for B. Arch. course SoALD SMVDU & are well settled in parts of the Globe including Reputed abroad Universities. School is recognized by Council of Architecture, COA New Delhi.

### A. List of major Consultancies taken by School

Name of the consultant	Name of consultancy project	Consulting/Sponsoring agency with contact details	Year	Revenue generated (INR in Lakhs)
Ar. Aditya Kumar Singh & Ar. Navin Gupta &Er. (Dr.) V.K. Dogra	Faculty Housing at SMVDU Campus (R1 & R2)	SMVDU, Katra	2014	pro-bono (Cost saved approx. 50,00000/-)
Ar. Aditya Kumar Singh & Er. (Dr.) V.K. Dogra	War Memorial, Samba	Col. Anil Sharma, 24 Grenadiers, Samba (Ministry of Defense, Govt. of India)	2018	50,000/-(In progress)
Ar. Navin Gupta	Master plan of School under SarvShikshaAbhiyaan at Basholi, J&K	SarvShikshaAbhiyaan Scheme	2017	Pro-bono (cost saved approx. 250000/-)
Ar. Navin Gupta	Proposed addition/alteration in the existing building of ChintamaniAshram	Chintamani Ashram Trust	2018	35000/-

	Trust, Katra			
Ar. Navin Gupta , Ar. Abhiney Gupta, Ar. Abhimanyu Sharma, Ar.Vishal Bhatti	Architectural and landscape Design of Jambu Zoo at Jagti, Nagrota, J&K	Deptt. Of Wildlife Protection , J&K	2018	Phase I- 24 Crores with Fee @ 6.5%= 1.56 crores
Ar. Abhiney Gupta	School of Architecture & Landscape Design Building	SMVDU, Katra	2009	pro-bono (Cost approx. 3.86 Crores)
Ar. Abhiney Gupta	Medical Aid Center Building	SMVDU, Katra	2007	pro-bono (Cost approx. 35 lacs)
Ar. Abhiney Gupta	Interior Design for Hotel Tsokar Retreat, Leh	Tsokar Group of hotels	2017	Project cost – 80 lacs and fee Rs. 50,000/-
Ar. Abhiney Gupta	Renovation of Party Hall 1 , Jammu Club	Jammu Club	2017	Project cost – 25 lacs and fee Rs. 55,000/-
Ar. Abhiney Gupta	Basoli Boys Hostel at SMVDU (working DWGS complete set)	SMVDU Katra	2016	Pro-bono basis
Dr. V. K. Dogra	Structural Consultancy for Faculty Housing at SMVDU Campus (R1 & R2)	SMVDU, Katra	2014	pro-bono (Cost saved approx. 9,00,000/-)
Dr. V. K. Dogra	Structural Consultancy for Multi-Level Parking of Super Specialty Hospital Jammu	PWD (R&B)Medical College and Tawi Bridge Division, Jammu	Ongoing	6,30,000/-
Dr. V. K. Dogra	Structural Consultancy for Main Building of District Court Complex, Samba	Police Housing Corporation Jammu	2015-16	4,73,100/-
Dr. V. K. Dogra	Structural Consultancy for the Design of 96 Bedded OBC Hostel at Doda, J&K	PWD (R&B) Special Sub Division, Doda, J&K	2017	99,120/-

Dr. V. K. Dogra	Testing of Bricks	M/s Om Bricks and Tiles Industries	2016-2017	44,880/-
Dr. V. K. Dogra	Design of Boundary Wall along Nallah	SMVDU	2018	pro-bono (Cost saved approx. 70,000/-)
Dr. V. K. Dogra	Proof Consultancy for Roofing Structure of proposed Multipurpose Hall on 2 <sup>nd</sup> floor of Guest house Building.	SMVDU	2018	pro-bono (Cost saved approx. 50,000/-)
	Construction of additional storage space at Sports Stadium	SMVDU	2017	pro-bono (Cost saved approx. 7,000/-)

# C. Faculty Research Consultancy Expertise/ Specialization

S. No.	Faculty	Area of Expertise	Research/ Consultancy Capabilities
1	Dr. Rajeev Garg	Architectural Design	Conceptualization of Built
2	Dr. Rashmi Kumari	Architectural Design & Planning	Environment, Carrying Out  Architectural Design,
3	Dr. V. K. Dogra	Structural Design	Presentation of Design,
4	Mr. Abhimanyu Sharma	Architectural Design	Delivery of execution drawings (GFC), Preparation of Contract & Tender
5	Mr. Abhiney Gupta	Architectural Design	documents, Site appraisals
6	Mr. Aditya K Singh	Landscape Design	and preparation of DPR (Detailed Project Reports),
7	Mr. Anoop Sharma	Architectural Design	Performance Evaluation of
8	Mr. Navin Gupta	Landscape Design	buildings, Green / Energy Audit.
9	Mr. Satyanshu Kumar	Disaster Mitigation	
10	Ms. Sourovee Dutta	Urban Design & Planning	
11	Mr. Vinod Kumar	City Planning	

# D. List of Equipment available in School for Research & Consultancy

S.No.	Name of Equipment	Details
1	Compression Testing Machine	1000 Kg Capacity
2	Compaction Testing Machine	Standard Equipment
3	Kelly bell Penetration Apparatus	Standard Equipment
4	Slump Cone Apparatus for Workability of Concrete	Standard Equipment
5	Vicate Needle Apparatus	Standard Equipment
6	Vibrating Machine	Standard Equipment
7	Concrete Mixture	Standard Equipment
8	LeChatlier Apparatus for Soundness	Standard Equipment
9	Electric Oven for Water Absorption Test	200 <sup>0</sup> C capacity

# E. List of Software available for in School for Research & Consultancy

S.No.	Name of Software	Details
1	AutoCAD 2D & 3D	Educational Version
2	AutoDesk REVIT	Educational Version
3	Google SketchUP	Educational Version
4	STAD Pro	Educational version
5	Mx Road	Educational Version

# F. Details of Testing facilities available in the School

S.No.	Name of facility
1	Compression Test of Bricks
2	Compression Test of Concrete
3	Consistency of Concrete
4	Workability of Concrete
5	Initial and Final Setting Time of Cement & Concrete
6	Water Absorption Test of Brick

# G. MOUs

Organization with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU	Duratio n	List the actual activities under each MoU year wise	Number of students/teachers participated under MoUs
Department of Wildlife Protection J & K	Department of Wildlife Protection J & K	2018	03 years	Architectural & Landscape Design	04

# K. Research

FY	Number of International Journal papers	Number of National Journal papers	Number of FDP Organized	Number of other events (Conference/Workshop/Semin ar etc.)
2018-17	31	4	1	1
2017-16	8	0	1	1
2016-15	18	5	0	1
2015-14	0	0	0	0
2014-13	0	0	0	0

Name of the School: Energy Management

Year of establishment: 2005

Contact: 01991-285535 Extn:2362

### **Brief Profile of School:**

The School of Energy Management previously School of Infrastructure Technology & Resource Management was established in the year of 2005-2006. The objective of the School is to offer academic program and conduct research in the area of Energy, Renewable Energy and Environment related issue. Presently, the School is running a full time M. Tech. program in Renewable Energy and Energy Systems and Full/Part time Ph.D. Program in various areas. School is well focused in the research work on Solar Energy (Thermal and Photovoltaics), Energy Storage, Exergy analysis of Refrigeration Systems, Exergy & Exergoeconomic analysis of Renewable Energy Systems, Phase Change Materials and Its Applications, Building simulation, chemical exergy, waste water treatment through renewable energy sources.

A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowments, chairs	Name of the principal investigator / co investigator	Name of the funding agency	Type (government /non- government)	Departmen t of principal investigator / co investigator	Year of award	Funds provided (INR in lakhs)	Duratio n of the project
Simulation and Performance Evaluation of Vapor-Compression-Absorption (VCA) Hybrid Refrigeration System for Cooling and Heating Applications	Sanjeev Anand	CSIR	Govt.	Energy Manageme nt	2011	6.13	2 Years
Development of Solar Thermal Photovoltaic Hybrid System with PCM's storage unit for	Vineet V. Tyagi	UGC	Govt.	Energy Manageme nt		6.00	2 Years

heating and				
cooling				
application in				
Buildings				

**B.** Faculty Consultancy Expertise

S.No.	Faculty	Area of expertise	Consultancy Capabilities
		Refrigeration and Air conditioning,	
1	Dr. Sanjeev Anand	Building Energy Efficiency, Solar Thermal	Good
		Systems and Conditioning Monitoring	
		Thermal Energy Storage systems and	
2	Dr. VineetTyagi	applications, Phase Change materials,	Good
		Solar PV, PVT systems	

C. List of equipments available in School for Research & Consultancy

S.No.	Name of Equipment	Details	Project No.
1	IV-400	Required for the testing of solar panels	University Funds
2	Solar Thermal Kit	Testing of solar thermal collectors	University Funds

## D. List of Software available for in School for Research & Consultancy

S.No.	Name of Software	Details	Project No.
1	Engineering Equation Solver	Simulation Software	University Funds
2	Trnsys	Transient Simulation	University Funds

E. Details of testing facilities available in the School

S.No.	Name of facility	Details	Project No.
1	IV-400	Required for the testing of solar	University Funds
		panels	

## F. MOUs

Organization with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU	Duration	List the actual activities under each MoU year wise	Number of students/teachers participated under MoUs
C- presently National Institute of Wind Energy	SMVD University	2014	5 years	Solar Radiation Resource Assessment on continuous basis	All the student and teachers of School of Energy Management
Taylormade Solar Solutions Pvt. Limited	SMVD University	2016	5 years	NIL	

## K. Linkage with industry

Title of the linkage	Name of the partnering institution/industry /research lab with contact details	Year of commen cement	Duration	Nature of linkage	Name of the participant
Student	BOSCH	2018	4 Weeks	Industry/	Rudraksh Gupta,
Training				Field Training	Sharan Gupta and
					Rahul Khajuria
Student	NIWE	2018	4 Weeks	Industry/	Umar, Vibushit, Nipun,
Training				Field Training	Aaquib and Moazum

### L. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of other events (Conference/Workshop/ Seminar etc.)
2017-18	10	01	01
2016-17	09	NIL	01
2015-16	09	NIL	Nil
2014-15	09	NIL	NII
2013-14	08	NIL	Nil

# M. Other significant achievement of the school

- 1. School is the recipient of prestigious National Renewable Energy fellowships (MNRE) for M.Tech. and Ph.D. students.
- 2. Publication of research papers in the Journals of High Repute and High Impact Factor

Name of the School: Mechanical engineering

**Year of establishment:** 2006

**Contact:** Prof. R. K. Mishra (Head, ME)

#### **Brief Profile of School:**

The school of Mechanical Engineering was established in 2006 and offers B.Tech. (Mechanical Engg.), M.Tech. (Manufacturing & Automation) and Ph.D. program in emerging fields of Mechanical Engineering.

The B.Tech. admission process is conducted as per the guidelines of CSAB (Central Seat Allocation Board) and SMVDU Entrance examination. M.Tech. and Ph.D. admission process is conducted through proper advertisement in national/local newspapers. The students are admitted on the basis of GATE score and also through written test for non-GATE candidates

Academic activities are planned in advance to follow strict academic calendar. Industrial visits are organized regularly to give a practical experience besides regular classroom teaching. Tutorials, quizzes, presentations, video lectures, etc. are inclusive part of the curriculum.

The school has well qualified 14 faculty members having academic and industrial experience with expertise in different fields of Mechanical engineering like Design, Production, Thermal, CAD/CAM, Robotics, Industrial engineering, Building Simulation, Energy Management. School of Mechanical Engineering is equipped with research equipments such as Electro Discharge Machine, 3D Printing, CNC Machine, VMC Machine, Tribometer, Computer Integrated Metallurgical Microscope, Mini Thermal Plant, Computer Integrated Multi Cylinder Diesel Engine Test rig etc.

### A. Faculty Research Consultancy Expertise/ Specialization:

S.No.	Faculty	Area of expertise	Research/ Consultancy Capabilities
1.	Prof. I. K. Pandita	Design	Design
2	Prof. E. Moorthy	Thermal	Thermal
3	Dr. R. K. Mishra	Design and composites	Design and composites
4	Dr. B. Singh	Production	Production
5	Dr. A. Anand	Design & sustainability	Design & sustainability
6	Dr. Yatheshth Anand	Thermal & CAD/CAM	Thermal & CAD/CAM
7.	Mr. Sanjay Mohan Sharma	Industrial & Design	Industrial & Design
8	Mr. Sanjay Sharma	Thermal	Thermal
9	Mr. Varun Dutta	Design	Design
10	Mr. Mir Irfan Ul Haq	Design & material	Design & material
11	Mr. Kapil Chopra	Thermal	Thermal

12	Mr. Amit Kumar Sinha	Industrial	Industrial
13	Mr. Rajiv Kumar	Production &industrial	Production &industrial
14	Mr. Ankush Raina	Mechanical system	Mechanical system
		design	design

## B. List of equipments available in School for Research & Consultancy

S.No.	Name of Equipment	Details
1	High temperature Tribometer	Ducom mode 400 PHM
2	CNC Machine(Turning)	Batliboi
3	VMC machine	Batliboi
4	EDM Machine	
5	3D printer	Athrava (mega FDM)
6	microhardness tester	
7	optical microscope	

# C. List of Software available for in School for Research & Consultancy

S.No.	Name of Software	Details	Project No.
1	ANSYS	FEM software	B.tech & M. tech
2	CATIA	CAD software	B.tech & M. tech
3	3D Experience	Dassault	B.tech & M.tech

# D. Details of testing facilities available in the School

S.No.	Name of facility					
1	Tribo testing					
2	Micro hardness					

## E. MOUs

Organization with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU	Duration	List the actual activities under each MoU year wise	Number of students/tea chers participated under MoUs
IIT, Jammu	IIT, Jammu	2018	5 years		

# F. List of Research projects submitted to funding agency

- 1. ISRO-1 NO Dr. R. K. Mishra
- 2. DST-MES 1NO Dr. M. ESwaramoorthy
- 3. DEDO(A.A) 1NO (Co-PI A.R)

# 4. DST (A.A)

# G. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of FDP organized	Number of other events (Conference/Workshop/Seminar etc.)
2018-17	20	-	1	4
2017-16	18	-	-	3
2016-15	15	-	-	-
2015-14	12	-	-	-
2014-13	10	-	1	-

## H. Patents

Sr .N o.	Year	Reference number	Title	Inventors & co- inventors	Patent Authority	Filing status with Patent Authority	Applicati on Status
1	2018	20181103 8186	Ergonomically designed Multitasking Mop handle	Sanjay Mohan Sharma, Nikhil Kumar	Indian Patent Office	Provisional Filed	Awaited
2	2018	20181103 1311	Check Valve Drip-Set	Vikrant Charak	Indian Patent Office	Provisional Filed	Awaited
3	2018	Ref no. Smvdu/1P Msc/016	Fabrication and performance analysis of LPG or compressed air based refrigeration system	Anand Bharti R.K.Mishra	Indian Patent Office	Submitted	Awaited
4	2018	Reference no: SMVDU/IP MSC/027	Synthesis and characterization of bone based nanoparticles	Pawandeep Singh R.K. Mishra Balbir Singh	Indian Patent Office	Submitted	Awaited

Name of the School: School of Business

Year of establishment: 2004

**Contact:** 01991 285690/2400 & 9419999202

## **Brief Profile of School:**

As part of the University, Faculty of Management (FoM) has established itself as one of India's leading centres of excellence in management education and research. The School of Business as one of the constituents of FoM is offering NBA Accredited Master of Business Administration (MBA) and Ph.D. Programme since 2004.

School of Business, Shri Mata Vaishno Devi University is the first and only institution in the State of J&K that offers NBA accredited MBA programme. The accreditation shall further help the students in their career as it is one of the certification of quality procedures and practices followed by the institution. It is a value addition to the degree at national and international level. It would also help the institution in attracting the best of the talent and support at national and international level.

The School of Business has a well-equipped computer laboratory containing the latest hardware. The laboratory is used extensively by students for research work and for learning specialized packages like SPSS, Prowess & EIS which are used for statistical and trend analysis. High speed Internet connectivity is available to students round-the-clock.

## A. List of research project sponsored by government/non-government agencies:

Name of the project/endo wments chairs	Name of the principle investigator /co-investigator	Name of the funding agency	Type (government /non- government)	Departme nt of principal investigat or/ co- investigat or	Year of Awar d	Fund provided (INR in lakhs)	Duration of the project
Adoption of Banking Technology in Jammu in the state of J&K State: An Empirical Study	Principle Investigator - Dr. D. Mukhopadh yay Co- Investigator Dr. Pabitra Kumar Jena	UGC	Government	School of Business	2013	5.87	April 2013- March 2016
Process of improvement of Apple Fruits production in Kashmir	Principle Investigator - Dr. D. Mukhopadh yay	ICSSR	Government	School of Business	2013	5	Oct 2013- June 2015

Region of J&K:	Co-						
An Empirical	Investigator						
Study	Dr. Pabitra						
Study	Kumar Jena						
"An		AICTE	Carramanant	School of	2012	Г 7Г	A .a:1
	Principle	AICTE	Government		2012	5.75	April,
Evaluation of	Investigator			Business			2012 to
Advertisement	- Dr. Supran						March,
Effectiveness	Kumar						2016
in India"	Sharma						
	Co-						
	Investigator						
	Dr. Jyoti-						
	Sharma						
"Empirical	Principal	State	Government	School of	2012	4.40	May, 2012
Study of	Investigator	Electricit		Business &			to March,
Psychology &	s- Dr.	У		School of			2015
Mindset of	Supran	Regulato		Electronic			
Electricity	Kumar	ry		s and			
Consumers in	Sharma	Commiss		Communic			
the State of	Dr. Sunil	ion J&K		ations			
J&K and the	Giri	State,					
Social Impact	Dr. Sumeet	Jammu					
of Power	Gupta						
Losses in J&K:							
Performance,							
Challenges &							
Opportunities							
n .							
Technological	Principle	ICSSR,	Government	School of	2011	4.46	March,
Changes in	Investigator	New		Business			2011 to
Manufacturing	- Dr. Jyoti-	Delhi					June,
Organizations:	Sharma						2013.
A Study of	Sharma						
North-West	Co-						
States of	Investigator						
India"	- Dr. Supran						
	Kumar						
"Dimensions	Principal	UGC,	Government	School of	2011	1.20	February,
of Industrial	Investigator			Business			2011 to
Sickness in	s- Dr.						November
SMEs- A Study	Supran						, 2012.
of Jammu &	Kumar						
Kashmir State"	Sharma						
"Dynamics of	Principle	AICTE,	Government	School of	2008	4.50	April,

Stress at Workplaces: an Empirical Study of J&K State"	Investigator - Dr. Jyoti- Sharma Co- Investigator - Dr. Supran Kumar			Business			2008 to March, 2010
"Performance and Prospects of Small Scale Industries in the State of Jammu and Kashmir"	Principal Investigator s- Dr. Supran Kumar Sharma	ICSSR	Government	School of Business	2007	Rs.1.74	December , 2007 to November , 2008.
Training Need Assessment for the Employees of SMVD Shrine Board, Katra, J&K	Dr. Saurabh Principle Investigator and Dr. Jyoti Sharma Co- Principle Investigator	SMVD Shrine Board	Government	School of Business	2016	2.80	March, 2016 to Septembe r, 2016.
A Comparative study of firm level competitivene ss of food processing units of Himachal Pradesh and Jammu and Kashmir	Dr. Saurabh	ICSSR	Govt.	SoB	01/05 /2014	10	3 years
Economic Value Added as a measure for competitive advantage in Indian Companies	Dr. Saurabh	UGC	Govt.	SoB	01/07 /2012	4.74	3 years
Engaging Employees: An Insight from	Dr. Arti Maini	UGC	Govt.	SoB	2015	9.18	3 years

Small and Medium Scale Enterprises of Jammu Region, Jammu and							
Kashmir State							
Dynamics of Stress at Workplaces: an Empirical Study of J&K State		AICTE	Government	School of Business	2008	4.50	April, 2008 to March, 2010
Enterprising Jammu	Principle Investigator Dr. Sushil Kumar Mehta Co- Investigator Dr. H. G. Mishra	AICTE	Government	School of Business	2008	7.40	3 years
Organised Retailing in Jammu	Principle Investigator Dr. H. G. Mishra Co- Investigator Dr. Sushil Kumar Mehta	UGC	Government	School of Business	2011	4.78	Aug 2011 to Dec 2013
Impact of FDI on retail sector in Jammu	Principle Investigator Dr. H. G. Mishra	AICTE	Government	School of Business	2013	5	May 2013 to Dec 2015

# B. List of major Consultancies taken by School

Name of the consultant	Name of the consultancy project	Consulting/Sponsoring agency with contact details	Year	Revenue generated (INR in LAKHS)
Dr. Saurabh & Dr. Jyoti		SMVDSB, Katra, J&K	2016-17	2.85

Sharma	SMBDSB			
	Employees			
Dr. Sanjay	Preparation of	M/s Global Milk and Food	2015	0.56
Kumar Mishra	Detailed Project	Products, Jammu		
	Report for the			
	Business			
	Restructuring of			
	M/s Global Milk			
	and Food			
	Products,			
	Jammu (J&K)			

# C. Faculty Research Consultancy Expertise/ Specialization

S.No.	Faculty	Area of expertise	Research / Consultancy Capabilities		
1	Dr. D. Mukhopadhyay	Taxation, Corporate Laws, Finance & Cost Management, & Accounting	Advisor to different level of management		
2	Dr. Supran Kumar Sharma	Project Management, Entrepreneurship Management, Decision Models & Optimization	Business Plan Formulation, Start- ups, Market Science & Analytics		
3	Dr. Jyoti Sharma	Industrial Psychology, Stress Management, Performance Management, Negotiation & Dispute Handling at Workplace	Industrial Psychology, Conflict Management, HR Analytics, Wellbeing Measurement, Change Management, Organisation Development, Performance Management, Negotiation & Dispute Handling at Workplace		
4	Dr. AshutoshVashistha	Finance & General Management	Financial Management, Power Sector, and Social Sector issues		
5	Dr. Sushil Kumar Mehta	Security Analysis & Portfolio Management, Financial Statement Analysis	Fundamental Analysis, Technical Analysis		
6	Dr. Saurabh	Strategy, Marketing, Social Entrepreneurship	Training and Development, Organizational Development, Process Development		
7	Dr. H. G. Mishra	Digital & Social Media Marketing, Retail	Retail & Digital Marketing		

8.	Dr. Sanjay Mishra	Finance, Supply Chain &	Finance, Supply Chain &		
		Managing Family	Managing Family Business		
		Business			
9.	Dr. Arti Maini	Human Resource	Understanding Employee		
		management,	Psychology, Enhancing		
		Organizational	Managerial efficiency		
		Psychology			
10	Dr. Rashi Taggar	Supply Chain	Understanding Consumer		
		Management and	Psychology, Enhancing		
		Marketing Management	Operational Efficiencies, Soft		
			Skills Development		
11	Dr .Syeda Shazia	Hr, Marketing, Strategic	Performance and Talent		
	Bukhari	Management	Management, Industrial		
			Psychology, Organizational		
			Development, Training and		
			Development		
12	Dr. Rooplal Sharma	Economics / Banking	Economics & Banking		
13	Dr. DeepaakKumaar	Marketing, International	Rural Marketing, Services		
	Jain	Marketing	Marketing, Industrial Goods		
			Marketing etc.		

## D. List of equipment's available in School for Research and Consultancy

S.No.	Name of the Equipment
1.	Licence Software SPSS, E-Views, AMOS, Data Bank PROWESS
2.	Well-equipped computer 02 Labs,
3.	Enriched School Level Library

## E. MOUs

Organization with which MoU is signed	Year of singing
	MoU
HVS University, Grurugram, Haryana	2017
St.J.P. University, Columbia	2018
CRSU, University, Jind Haryana	2018

## F. List of Research projects submitted to funding agency

Project Proposal Title: Intensity and Effectiveness of Corporate Social
 Responsibility Practices in India: An Empirical Analysis submitted to AICTE, New Delhi

### G. Centre at the school

## **Entrepreneurship Development Cell:**

The Entrepreneurship Development Cell, SMVDU has been established in 2010. The EDC-SMVDU provides effective linkages with various Schools (departments) of the campus to Page **55** of **68** 

bring about entrepreneurial culture for optimal utilization of the expertise, resources and know-how available. It also networks with other agencies involved in entrepreneurship development and has conducted short term courses, MDPs, FDPs, ESDPs, Business Plan Competitions, Entrepreneurship Awareness Camps etc. in association with agencies like DST-NIMAT Project, GoI, AICTE, Micro, Small and Medium Enterprise Development Institute, GoI, National Skills Development Council etc. for students, faculty members, corporate people, etc. Moreover, with the purpose to inculcate entrepreneurial skills an open elective course is also offered to B.Tech students and compulsory course in MBA Programme

### H. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of FDP organized	Number of other events (Conference/Workshops/ Seminar etc)
2017-18	12	5	1	13
2016-17	18	6	9	11
2015-16	16	7	1	17
2014-15	17	10	3	14
2013-14	24	14	1	7

## I. Other significant achievement of the school

- MBA Program of School of Business is NBA Accredited
- Member of Association to Advance Collegiate Schools of Business (AACSB)
- Association of Management Development Institutions in South Asia (AMDISA)

Name of the School: School of Economics

Year of establishment: 2013

Contact hod.doe@smvdu.ac.in

### **Brief Profile of School:**

School of Economics at Shri Mata Vaishno Devi University, Katra (J&K) is a newly established School under Faculty of Management. The mission of the School is to be an internationally leading Centre of Excellence in the Economics, raise its research and teaching programmes to the highest standards, provide consultancy to industries and government. The vision is to to take Economics beyond classroom, inculcate problems solving skills, address the emerging global challenges and disseminate knowledge in economics through inter-disciplinary study and research. As one of the constituents of the University, School of Economics has established itself as one of India's leading centers of excellence in Economics teaching and Research. The School of Economics is offering Five Year Integrated M. Sc.(Economics) and Ph.D. programme in Economics. The School has been organizing seminars, conference, workshops, special lectures and other academic programmes on issues of national and international importance from time to time.

## A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowment s, chairs	Name of the principal investigator/ co investigator	Name of the funding agency	Type (governm ent/non- governme nt)	Departmen t of principal investigator / co investigator	Year of award	Funds provided (INR in lakhs)	Duration of the project
Adoption of Banking Technologie s in Jammu region of India: An Empirical Study	Prof.(Dr.) D. Mukhopadhy ay/ Dr. Pabitra Kumar Jena	Universit y Grants Commiss ion	Governme nt	Business/ Economics	2016	Rs. 5, 87, 600	2 Years
Process Improveme nt of Apple Fruits Production	Prof.(Dr.) D. Mukhopadhy ay/ Dr. Pabitra Kumar Jena	Indian Council of Social Science Research	Governme nt	Business/ Economics	2015	Rs. 5,00, 000	18 months

in Kashmir Region: An Empirical Study							
Efficiency Analysis of Hill Agriculture	Dr. Kakali Maumdar	Indian Council of Social Science Research	Governme nt	Economics	Ongoin g	Rs. 7,00,000	Two Years

# B. List of major Consultancies taken by School

Name of the consultant	Name of consultancy project	Consulting/Sponsoring agency with contact details	Year	Revenue generated
Dr. Pabitra Kumar Jena	Governance of Power Sector: A Study of Policy and Performance of Assam Power Sector	Assam Central University	2016	Rs. 30, 000

# C. Faculty Consultancy Expertise

S.No	Faculty	Area of expertise	Consultancy Capabilities
1.	Prof. B. Kamaiah	Big Data Analysis & Financial Economics, Financial Engineering & Monetary Economics	Big data analysis & Financial Economics
2.	Dr. KakaliMajumdar	Applied Econometrics, Agricultural Economics & Statistics	Data Analysis, Productivity and Efficiency Analysis& Agricultural Economics
3.	Dr. Meenakshi Gupta	Agricultural Economics & Statistics	Data Analysis & Agricultural Economics
4.	Dr. Pabitra Kumar Jena	Applied Econometrics & Time Series Analysis	Data Analysis, Productivity and Efficiency Analysis & Macro Economic Modeling
5.	Dr. KirttiRanjan P.	Agricultural Economics & Applied Econometrics	Data Analysis & Agricultural Economics
6.	Dr. ArifBillah Dar	International Finance, Financial Economics & Macro Economics	International Finance & Macro Economic Modeling
7.	Dr. D P Priyadarshi Joshi	Classical Political Economy & Productivity Analysis	Productivity Analysis
8.	Dr. Gopinathan R	Financial Economics & Data Analytics	Predictive Financial Modeling

## D. List of Software available for in School for Research & Consultancy

S.No	Name of Software	Details	Project No.
1.	R	Data Analysis Software	NA
2.	IBM Statistical Package for the Social Sciences	Data Analysis Software	NA
3.	E-Views	Data Analysis Software	NA

## E. List of Research projects submitted to funding agency

- 1. "Development of Eco-Tourism Opportunities in Jammu & Kashmir Employment Generation" submitted to, Department of Tourism, Government of Jammu & Kashmir.
- 2. "Development and Impact of Tourism Industry on Jammu & Kashmir Economy of India: An Experience from Switzerland" submitted to Indian Council of Social Science Research.

### F. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of FDP organized	Number of other events (Conference/Workshop/S eminar etc.)
2018-17	10	7	0	02
2017-16	5	8	2	03
2016-15	3	20	0	05
2015-14	7	9	0	04
2014-13	5	7	0	03

## G. Other significant achievement of the school

1. Organized 54<sup>th</sup> The Indian Econometrics Society (TIES) Annual Conference at School of Economics, Shri Mata Vaishno Devi University, Katra, Jammu & Kashmir during 7-9<sup>th</sup>, March, 2018.

Name of the School: School of Languages and Literature

**Year of establishment:** December 2005

Contact: Dr. Amitabh Vikram Dwivedi, Assistant Professor & I/c. Head of

School

### **Brief Profile of School:**

Language is the most powerful means of communication, a potent instrument of artistic expression, literary creativity and a significant medium for the expression and conservation of culture. Language, therefore, is all pervasive, indispensable aspect of mankind. Ostensibly, there exists an intrinsic form of relationship between language and literature and this symbiotic co-relation is intercomplementary. Literature represents language and people: culture and tradition and introduces us to new worlds of experience as we evolve our own literary journey with books. In essence, literature is a reflection of life.

Based on this premise, the School of Languages and Literature was set up in December 2005 for teaching and research in major languages and literatures of the world particularly the major modern European & Sino-Tibetan languages like English, Chinese, French, German, Russian, Spanish and British, American & Commonwealth literatures.

English as a language is a huge reservoir into which words, metaphors and expressions from all over the world keep on flowing. The process has been going on since Anglo-Saxon Period (650 A.D.) and right till now. Therefore, as an obligatory duty School of Languages and Literature has been focusing on English Language Teaching (ELT) since its inception. However, foreign languages such as Chinese, French, German Russian & Spanish have cumulatively formed and continue to form a kind of language bastion. The School of Languages plans to add the teaching of these foreign languages in a phased manner. The process began with an intensive certificate course in French which the school has been offering twice in a year i.e. January & June since January 2007.

**Vision:** Envisioning as a centre of professional excellence, academically sound environment and bringing structural transformation in the society through teaching and research in languages and literature.

**Mission:** Pursuit of Language and Literary Education, Research and Consultancy in conformity with established global standards and practices.

## **Program Educational Objectives**

(M. A. Two Year Full Time Degree Program)

**PEO 1**:

MA Graduates will be well prepared for pursuing successful careers in Teaching and Higher

education in one or more areas of languages and literary studies and executing high quality teaching and research, impart training in language learning, create projects and perform copyediting and content writing.

### PEO 2:

The MA graduates will be prepared to become college and University teachers, educationalists, translators, copy editors, language trainers and researchers in organizations and will contribute positively, ethically and respectfully with an informed international perspective.

#### PEO 3:

The MA graduates will be prepared to be compatible to specialize by pursuing higher education in languages and literature, allied fields and/or interdisciplinary studies of their interest to widen their horizon for valuable input to the profession and society at large.

## **Program Outcomes (POs)**

(M. A. Program offered by SoL&L)

The curriculum and syllabi of M.A. Two Year Full Time Degree Program is designed to achieve identified Graduate Attributes (GAs) with the following Pos.

After successful completion of the degree program, a student will be able to:

- 1. Apply the advance knowledge of Literature and Linguistics specialization and to use it in both in the past as well as present context.
- 2. Identify, formulate research questions, and analyse research problems to carry out independent research and to arrive at substantiated conclusions using the theoretical principles of literature and linguistics.
- 3. Provide suggestions/solutions for literary, linguistics and societal issues and recommend policy makers for matters related to literature and language, considering moral sensitivity, and the cultural, societal, and environmental considerations.
- 4. Use research-based knowledge including language and literary theories, analysis and interpretation of language and literary texts, and synthesis of knowledge to provide valid conclusions.
- 5. Create, select, and apply appropriate language teaching methods and techniques to real life classroom situation, and employ resources and literary theories to real life situation with an understanding of the difference between fiction and reality.
- 6. Apply reasoning derived from the contextual knowledge of language and literary texts to assess literature, language and cultural issues and the consequent responsibilities relevant to the professional literary practices.
- 7. Understand the impact of the literature and linguistics in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable and ecological development.
- 8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the social practice.
- 9. Function effectively as an individual, and as a member or leader in teams, and in multidisciplinary settings.

- 10. Communicate effectively with the multidisciplinary community and with society at large. Be able to comprehend and write effective dissertation and academic papers. Make effective presentations, and give and receive clear instructions.
- 11. Demonstrate knowledge and understanding of literature and linguistics and apply these to one's own work. Manage projects in multidisciplinary environments.
- 12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of sociological change.

## A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowments , chairs	Name of the principal investigator/ co investigator	Name of the funding agency	Type (government/ non- government)	Departmen t of principal investigato r/ co investigato r	Year of award	Duration of the project
A Comprehensi ve Study of Culture, Philosophy, Literature and Language	Dr. Amitabh Vikram Dwivedi	ICSSR	Government	SOLL	2018	18 months

## **B.** Faculty Consultancy Expertise

Sr.	Faculty	Area of expertise	Consultancy Capabilities
1	Dr. Amitabh Vikram Dwivedi	Encyclopedia of World Poverty	CA: Sage Publications
2	Dr. Amitabh Vikram Dwivedi	Historic Sites and Landmarks that Shaped America: From Acoma Pueblo to Ground Zero	Santa Barbara, CA: ABCCLIO/Greenwood- Praeger
3	Dr. Amitabh Vikram Dwivedi	The Encyclopedia of Japanese Horror Films	Rowman & Littlefield
4	Dr. Amitabh Vikram Dwivedi	The Sage Encyclopedia of Online Education	Sage Publications Inc. CA
5	Dr. Amitabh Vikram Dwivedi	The SAGE Encyclopedia of War: Social Science Perspectives	Sage Publications Inc. CA
6	Dr. Amitabh Vikram Dwivedi	War and Religion: An Encyclopedia of Faith and Conflict	ABC-CLIO/Greenwood- Praeger
7	Dr. Amitabh Vikram Dwivedi	He Sea in World History: Exploration, Travel, and Trade, Santa Barbara	CA:ABCCLIO/Greenwoo d Praeger
8	Dr. Amitabh Vikram Dwivedi	The SAGE International Encyclopedia of Travel and Tourism	Sage Publications Inc. CA

9	Dr. Amitabh Vikram	Encyclopedia of Psychology and Religion	Springer-Verlag GmbH
	Dwivedi		Germany
10	Dr. Amitabh Vikram	EBSCO Research Starters	Academic Topics
	Dwivedi		Overview, EBSCO
11	Dr. Amitabh Vikram	EBSCO Literature	Academic Topics
	Dwivedi		Overview, EBSCO
12	Dr. Amitabh Vikram	Encyclopedia of Indian Religions.	Springer-Verlag GmbH
	Dwivedi	Hinduism and Tribal Religions	Germany
13	Dr. Amitabh Vikram	Islam : A Worldwide Encyclopedia	Santa Barbara, CA:
	Dwivedi		ABCCLIO/Greenwood-
	Dwivedi		Praeger
14	Dr. Amitabh Vikram	The SAGE Encyclopedia of Theory	Sage Publications Inc.
	Dwivedi		CA
15	Dr. Amitabh Vikram	The SAGE International Encyclopedia of	Sage Publications Inc.
	Dwivedi	Mass Media and Society	CA
16	Dr. Amitabh Vikram	Encyclopedia of Religion and	ABCCLIO/Greenwood
	Dwivedi	Contemporary Politics	Praeger

## C. List of Research projects submitted to funding agency

Research Project Proposal title: <u>Language Conservation and Documentation: A Linguistic Survey of Sarazi</u>, Submitted to: Indian Council of Social Science & Research (ICSSR), Amitabh VikramDwivedi, Project Director and Dr. Anurag Kumar, a Co-Director, Budget Estimate: Rs. 15,32,050/-

## D. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of FDP organized	Number of other events (Conference/Workshop/ Seminar etc.)
2018-17	4	5	1 (1 more FDP on 1 <sup>st</sup> Nov 2018 to 6 <sup>th</sup> Nov. 2018)	4 (1 more National Doctoral Student Conclave on18 <sup>th</sup> Sept. 2018)
2017-16	5	3	NA	3
2016-15	13	2	NA	1
2015-14	12	7	NA	1
2014-13	6	8	NA	1

E. Other significant achievement of the school (Books Published by Faculty Members of SoL&L)

### Dr. Amitabh Vikram Dwivedi

1. Title: A Grammar of Hadoti

Publisher: Lincom Europa Academic Publications

Place: Muenchen

Year: 2012

ISBN: 9783862881703

Series: Languages of the world. Materials; 485

(Indexed in: European libraries, including University of Oxford, MIT, German National

Library, Leiden University, University of Chicago, alike.)

Review: Parihar, Ravi. (2017) A Grammar of Hadoti. Dialectologia,

University of Barcelona, pp. 189-203 (ISSN: 2013-2247)

## 2. Title: A Grammar of Bhadarwahi

Publisher: Lincom Europa Academic Publications

Place: Muenchen

Year: 2013

ISBN: 9783862884353

Series: Languages of the world. Materials; 495

(Indexed in major European libraries, including University of Oxford, MIT, German

National Library, Leiden University, University of Chicago, alike.)

Review: Parihar, Ravi. (2017) A Grammar of Bhadarwahi. Sociolinguistic Studies,

Equinox Publishing. pp. 475-482 (ISSN: 1750-8657).

## 3. <u>Title: Chinaar-kaa-Sukhaa-Pattaa (Dried Leave of Chinar) Publisher: Anjuman Publication</u>

Place: Allahabad

Year: 2015

ISBN: 978-93-83969-56-2 4. Title: Something Lurks ItSeems

Publisher: Marfa House

Place: Texas Year: 2017

ISBN: 978-1-946072-21-4

### 5. Title: Dogri and its Dialects: A Comparative Study of Kandi & Pahari Dogri

Publisher: Lincom Europa Academic Publications

Place: Muenchen

Year: 2018

ISBN: 9783862888672

Series: Linguistic Edition, 115

(Indexed in: European libraries, including University of Oxford, MIT, German National Library,

Leiden University, University of Chicago, alike.)

### **Dr. Anurag Kumar**

### 1. Title: African American Literature: Politics of Marginal Space in the Fiction of Gloria Naylor

Publisher: Atlantic Publishers and Distributors Pvt. Ltd

Year: 2017

ISBN -10: 8126921463 ISBN - 13: 978-8126921461

### Dr. Ranbir Kaur

1. <u>Title: War Poets of English Literature</u>

Publisher: Random Publications, New Delhi

Year: 2015

ISBN: 978-93-5111-583-0

2. <u>Title: Realism in English Literature</u>

Publisher: Random Publications, New Delhi

Year: 2015

ISBN: 978-93-5111-580-9

3. <u>Title: The World Wars and English Literature</u> Publisher: Random Publications, New Delhi

Year: 2015

ISBN: 978-93-5111-582-3

## F. Special/Extension Lectures Organized by the School:

2018-17	7
2010 17	(5 more lectures organized in the month of July,
	August& October)
2017-16	3
2016-15	4
2015-14	NA
2014-13	NA

Name of the School: School of Philosophy & Culture (SoPC)

Year of establishment: 2005

**Contact:** 01991-285524 (08 Lines), 09622885588

### **Brief Profile of School:**

The School of Philosophy & Culture is one of the two constituent Schools of the Faculty of Humanities and Social Sciences. The School aspires to become multidisciplinary in the area of philosophical and cultural studies. Presently, it offers Master's and Ph.D. programme in Philosophy. Broad areas for Ph.D. programme are Indian Philosophy, Philosophy of Mind, Logic, Moral Philosophy and Analytical Philosophy. The School also offers core courses such as Introduction to Logic, Advance Logic and Discourse on Human Virtues as well as various open-elective courses to the B. Tech. students to inculcate analytic and critical attitude in them. The School is encouraged to offer introductory level courses to these students so that they develop an attitude of comprehensive understanding.

## A. List of research projects sponsored by the government/ non- government agencies:

Name of the project/ endowment s, chairs	Name of the principal investigato r/ co investigato r	Name of the fundin g agency	Type (government/no n-government)	Departmen t of principal investigato r/ co investigato r	Year of award	Funds provided (INR in lakhs)	Duration of the project
UGC Minor	Dr. Anil K.	UGC	Government				
Project	Tewari	000	Government	SoPC	2017	0.80/-	1.5 year

### B. List of equipments available in School for Research & Consultancy

S.No.	Name of Equipment	Details	Project No.
1.	Books	167	PR-38
2.	Computers	04	University Fund
3.	Photocopiers	01	University Fund

### C. MOUs

Organization with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU	Duration	List the actual activities under each MoU year wise	Number of students/teachers participated under MoUs
IGNCA, New Delhi		2018	5year		Implementation
					under process

### D. List of Research projects submitted to funding agency

I. "The Brain-Brahman Dichotomy: Study of the Problem of Consciousness with reference to the Reductionist- Antireductionist Debate". Submitted to ICPR, New Delhi

#### E. Research

FY	Number of International Journal papers	Number of national Journal papers	Number of FDP organized	Number of other events (Conference/Workshop/Seminar etc.)
2018-17	-	2	01	4
2017-16	-	2	-	4
2016-15	-	1	-	2
2015-14	-	2	-	3
2014-13	-	3	-	1

## F. Other significant achievement of the school:

### 2018

- i. Celebration of World Sanskrit Day on 27-08-2018
- ii. Celebrates World Environment Day in collaboration with NSS on 05-06-2018
- iii. One-Day National Doctoral Student Conclave jointly organized by School of Languages and Literature and School of Philosophy & Culture was held on 5th March 2018.
- iv. Organized Special lectures by Prof. P. Jetli, Visiting Faculty at Tata Institute of Social Sciences and an adjunct faculty of the School of Philosophy and Culture from 6-12 March 2018.
- v. Celebrate National Youth Day and organized an interactive session on "Exchanging Ideas for Transforming India" to celebrate 155th Birth Anniversary of Swami Vivekananda, the sage and visionary of modern India, on 12th January 2018.

### 2017

- i. World Philosophy Day celebrated 14-12-2017
- ii. Organized a special lecture on "Research Ethics" by Prof.GöranCollste, Professor Emeritus, Department of Culture and Communication, Linköping University, Sweden on 07-11-2017.
- iii. Celebrated the Constitution Day of India on 26th November 2017.
- iv. Organized a special lecture by Prof. Kisor K. Chakrabarti, Adjunct Faculty, School of Philosophy & Culture (SoPC) "Human Rights, Ethics and Spirituality: A Perspective from India" on 30-10-2017.
- v. Organized extensional lectures for faculty and research scholars, Prof. Alex Watson delivers three talks on different themes on Indian Philosophy. Prof. Watson is a D.Phil. from Oxford University and had been Fellow at Kyushu University Japan and University of Vienna from 9-11 March 2017.

### 2016

 i. Organized special lectures by Prof. Kisor Kumar ChakrabartiA renowned scholar of Indian Philosophy and retired Professor of Philosophy and Religion from Davis and Elkins College, West Virginia (USA) and Adjunct Professor in SoPC from 25th Nov. – 12th Dec. 2016.

- ii. Organized Special Lecture by Prof. S. P. Pandey, Prof. in Dept. of Philosophy & Religion, Banaras Hindu University on 14th June, 2016.
- iii. First Philosophy Alumni Meet on Thursday 5th May, 2016.

## 2015

- i. Organized an interactive session on "Facing Real-Life Challenges" by Swami Narasimhananda of Ramakrishna Mission on 6th August, 2015.\
- ii. Organized "Noth-Western Philosophy Teachers" Meet", sponsored by Indian Council of Philosophical Research (ICPR), New Delhi from 25th 27th February, 2015.

### 2014

i. Celebrated the World Philosophy Day on 28th Nov, 2014.