

## **Annual Quality Assurance Report (2014-15)**

## Submitted By

Nirma University
Sarkhej-Gandhinagar Highway, Ahmedabad- 382 481
Web Site: www.nirmauni.ac.in

To
The Director
National Assessment and Accreditation Council (NAAC),
P. O. Box No. 1075, Nagarbhavi,
Bangalore -560 072, Karnataka

Annual Quality Assurance Report
(Assessment Period: July 01, 2014 to March 31, 2015)

## Part - A

Details	of the Ins							
1.1	Name o	f the Inst	itution:		Nirn	na University		
					1			
1.2	Address	:				Nirma University,		
						Sarkhej Gandhinagar Highway,		
	City/To	wn:			Ahm	iedabad		
	State:				Guja	ırat		
	Pin Cod	e:			382	481		
	Instituti	on E-mai	1 Address	:	dg@	nirmauni.ac.in		
	Contact	Nos.:			079-	30642000/100/	/200/300/40	
	Name o	Name of the Head of the			Dr. A	Anup K. Singh		
	Institution:							
	Tel. No. with STD Code:				079-	30642711		
	Mobile:					25034700		
	Name o	f the IQA	C Co-ord	linator:	Dr. I	Dhaval Pujara		
	Mobile: IQAC E-mail Address:				0992	25965718		
					dy.d	dy.director.adr@nirmauni.ac.in		
1.3	NAAC '	JAAC Track ID: GJUNGN10152						
1.4	NAAC	Executiv	e Comm	ittee No	o. EC/I	PCA/52/35 date	ed 28-03-20	
	& Date:							
	T				1	<del></del>		
1.5		Address				v.nirmauni.ac.i		
	Web-lin	k of the	AQAR:		http:	http://www.nirmauni.ac.in/NU/		
1.0	Accreditation Details:							
1.6	Accredi	tation De	etails:					
		Sr. No.	Cycle	Grade	CGPA	Year of	Validity	
		51.110.	Cycle	Grade	COLA	Accreditation	Period	
		1	1 <sup>st</sup> Cycle	В	2.93	2010	Five Years	
1.7	Date of	Establish	ment of I	QAC:	24/0	9/2009		
	1				1			
1.8	AQAR	for the ye	ear		2014	2014-15 OAR submitted to NAAC after t		
1.0	D : 11	C .1	•	2 4	2 A D			
1.9			•		•	bmitted to NA	AC after t	
			Accredita					
	_ ` ,	AQAR 20		03-11-2				
	_ ` ′	AQAR 20		28-12-2				
	· ` ′	AQAR 20		19-12-2				
	` /			24-11-2	/014			
	_ ` _	AQAR 20		12-05-2				

1.10	Institutional Status:			
1.10	University:	State		
	Affiliated College:	No		
	Constituent College:	Yes		
	Autonomous college of UGC:	No		
	Regulatory Agency approved	Yes		
	Institution:	(PCI - Pharmacy Council of India,		
	mistration.	BCI - Bar Council of India,		
		CoA - Council of Architecture)		
		Corr Council of Filemeetale)		
		Note: Being a University, for Engineering and		
		Management, the AICTE prior approval is not		
		required as per the announcement made by the		
		AICTE in pursuance to the Hon'ble Supreme		
		Court of India judgement in the case of Bharathidasan University v. AICTE.		
	Type of Institution:	Co-education		
	Type of montation.	Urban		
	Financial Status:	Self-financing		
	i munciui butus.	Sen imaneing		
1.11	Type of Faculty/Programme:			
	Arts	-		
	Science	V		
	Commerce	_		
	Law	V		
	PEI (Phys Edu)	-		
	TEI (Edu)	_		
	Engineering	V		
	Health Science	√ (Pharmacy)		
	Management	√ (========;)		
	Others (Specify)	√(Architecture)		
	(optional)	, (====================================		
1.12	Name of the Affiliating University (for the Colleges)	Not Applicable		
1.13	Special status conferred by Central / / DBT / ICMR etc.	State Government - UGC / CSIR / DST		
	Autonomy by State / Central Govt.	State		
	/ University:			
	University with Potential for	The University has applied for the		
	Excellence:	status of Potential for Excellence vide		
		letter no. NU/ADR/ER/UGC/CPEPA,		
		dated September 27, 2014.		
	DST Star Scheme	Being a statutory private University,		
	UGC-Special Assistance	we are not covered under Section 12		
	Programme:	(B) of UGC Act. Thus, although there		
	UGC-Innovative PG programmes	is potentiality, the University is not		
	UGC-COP Programmes:	eligible for such assistance.		
	Any other (Specify):	• The Institute of Pharmacy has		
		received a funding of ₹ 55 Lacs		
	I .	1 The state of the base of the		

		under FIST programme Department of Sci Technology, New Delhi.  Recognition of 'Scie Industrial Research (SIRO)' by Department and Industrial Research India.	ence and entific and Organisation of Scientific		
_					
2.		Composition and Activities:			
	2.1	No. of Teachers:	08		
	2.2	No. of Administrative / Technical Staff:	04		
	2.3	No. of Students:	01		
	2.4	No. of Management Representatives:	02		
	2.5	No. of Alumni:	01		
	2.6	No. of any other Stakeholder and Community Representatives:			
	2.7	No. of Employers / Industrialists:	02		
	2.8	No. of other External Experts:	02		
	2.9	Total No. of Members:	20		
	2.10	No. of IQAC meetings at different Institutes:	39		
	2.11	No. of Meetings with Various Stakeholders:			
		Every constituent Institute of the University has an Alumni Association. The Institutes have conducted approximately, 18 meetings during the period.  With Non-Teaching Staff:  31 Meetings  With Faculty:  The Institute Heads conduct meetings with the Department Heads and the Department Heads conduct regular meeting with the faculty members. Approximately, 87 such meetings have been conducted during the period.  With Students:  42 Meetings  Others:			
2.12 Has IQAC received any funding from the UGC during the year?  No, Being a statutory private University, we are not covered under Second the UGC ACT and hence not eligible for funding from the UGC					
	2.13	Seminars and Conferences (only quality related):			
		No. of Seminars/Conferences/Workshops/Symposia organized by 17	the IQAC:		
		For details, please refer to Annexure – 1.			
	2.14	<ul> <li>Significant activities and contributions made by IQAC:</li> <li>Preparation of Self-study Report (SSR) and submitted to re-accreditation</li> </ul>	NAAC for		

- Development of University Quality Policy and IT Policy
- Development of 'Code of Ethics for Research'
- Introduced a scheme of providing funding for 'Major Research Projects'
- Introduced a scheme of Incentives and Awards for the faculty members for outstanding contribution in teaching and research
- Implementation of rigorous Academic Audit at Personal/Individual, Institute and University Level
- Implementation of structured Faculty Development Programmes of different types
- Promoting Culture of Research
- Continuous Monitoring of Teaching-Learning Activities through Reviews
- Organization of seminars, workshops, conferences, symposium, expert lectures, public lectures, training programmes etc.
- Plan of Action by IQAC/Outcome (The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year):

Plan of Action	Achievements
To implement Outcome Based Education concept more rigorously	The University has adopted a philosophy of 'Outcome Based Education (OBE)' from year
with assurance of learning	2013. During the assessment period, various course assessment and programme
	assessment techniques have been evolved. Rubrics were designed as assessment tools
	for various teaching-learning activities.
To prepare the draft of 'University	The draft of Quality Policy was prepared,
Quality Policy'	discussed and finalized by different academic bodies.
To prepare the draft of 'University IT	The draft of IT Policy was prepared,
Policy'	discussed and finalized by different academic
	bodies.
To prepare the draft of 'Code of	The draft of 'Code of Ethics for Research'
Ethics for Research'	was prepared, discussed and finalized by different academic bodies
To prepare the draft of 'Rules and	The first draft of the same is ready and will
Regulations to prevent Plagiarism in Research'	be finalized soon.
Strengthening 'Academic Audit'	The detailed guidelines and formats were
activities at the constituent institutes	decided for Academic Audit at three different
of the University	levels. First round of Academic Audit
	initiated at all levels.
To organize Faculty Development	A two-week Faculty Orientation Programme
Programmes on a larger scale	and a two-week Research Orientation
	Programme were organized. Several
	Refresher Programmes are under planning.

Whether the AQAR was placed in statutory body: -
Management: 

Syndicate: Not Applicable

Any other body: 

Not Applicable

University Level IQAC Committee			
Provide the details of the action taken:			
Suggestions given by the University Level IQAC have been incorporated in			
the report.			

### Part - B

### **CRITERION - I**

### 1. Curricular Aspects:

### 1.1 Details about Academic Programmes:

Level of the Programme	Number of Existing Programmes	Number of Programmes added during the year	Number of self-financing Programmes	Number of value added / Career Oriented Programmes
Ph.D.	5	0	5	-
PG	36	5	39*	-
UG	12	1	12#	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Certificate	-	-	-	-
Total	53	6	56	-

<sup>\*</sup> For two (02) PG Programmes, the admissions are not being offered. #For one (01) UG Programme, the admissions are not being offered.

Note: BBA-MBA is included in PG Programmes.

### List of Inter-disciplinary and Innovative Academic Programmes:

- 1. M.Tech. in Energy System (Interdisciplinary Programme)
- 2. M.Tech. by Research (Innovative Programme)
- 3. M.Sc. in Cosmetic Technology (Innovative & Inter-disciplinary Programme)
- 4. LL.M. in Legal Pedagogy and Research (Innovative Programmes)
- 5. LL.M. in Law, Science and Technology (Innovative & Inter-disciplinary Programme)
- 6. MBA in Family Business & Entrepreneurship (Innovative Programme)
- 7. BBA-MBA (Five Year Integrated Innovative Programme)
- 8. M. Pharm. Regulatory Affairs and Quality Assurance (Innovative Programmes)
- 9. M. Pharm. Clinical Pharmacy (Innovative Programmes)

### 1.2 (i) Flexibility of the Curriculum:

- The University offers option of Department, Institute and University Electives to the students.
- Different institutes offer supplementary courses, valued added courses and special audit courses to the students.
- The students can choose any foreign language course out of a pool of foreign language courses.
- Massive Online Open Courses (MOOCs) are also offered as noncredit courses.

1.2 (ii)	Pattern o	of Prog	rammes:				
			Pattern		Number of Pro	gramme	es
			Semester		49		
			Trimester		07		
			Annual				
1.3	Feedbac	k from	Stakeholde	rs:			
	Alumni		Parents		Employers	V	Students
	Online		Manual	<b>√</b>	Co-operating		
					schools (for		
					PEI)		
1.4	Whether	· there		rision/u <sub>]</sub>	in the Annexure		r syllabi,
	Yes, the	syllabi	•	progran	nmes have been exure-3.	revise	d / update

### **CRITERION – II**

### 2. Teaching, Learning and Evaluation:

### 2.1 Total No. of Permanent Faculty:

Sanctioned			Filed Posts		
Posts					
Total	Total	Asst.	Associate	Professors	Others
		Professors	Professors		
402	329	220	63*	46#	

<sup>\*</sup> Includes 18 Assistant Professors having AGP of Rs. 8000/- considered against the post of Associate Professors. All these faculty members were working as Reader or equivalent in prerevised scale. At the time of pay revision, they could not meet the prescribed criteria on a particular date and hence they were put in AGP of ₹ 8000/=. However, for all practical purpose they are in the second layer of teaching faculty, except Pay Band IV and have been shown under the category of Associate Professor, which is second layer in revision of scale.

# Includes 4 Adjunct Professors

	2.3	Note: Additional 27 new faculty members have been issued appointment orders recently  No. of Faculty Positions Recruited (R) and Positions Remained Vacant during the Year:									
			Assistant Professors	Associate Professors	Prof	essors	Others		Total		
			R V	R V		V	R	V	R	V	
			40 -17*	04 6	2 07	28	-	-	51	73	
			ional Assistant F Additional 27 nev								7.
_	2.4	No. of	<b>Guest and V</b>	isiting Fac	culty and	d Tem	porary I	Facult	y:		
					250 Gue 02 Visiti		•				
	2.5	Facult	y Participati	ion in Con	ferences	and S	ymposiu	ıms:			
			No. of Fa	aculty	Interna Lev		National	Level	State	Level	
			Attended Se Workshops /Sy	eminars / mposiums	17		93		0	8	
			Presented paper		113		40	)	0	2	
			Resource Perso	ns	25	í	16	i 	1	0	
	2.6		ative Process tails, please re	•	•	Institu	ition in T	<b>Feach</b> i	ing and	l Lear	ming:
	2.7	Total 2	No. of Actua	l Teaching	Days d	uring 1	this Acad	demic	Year:		
					1	81					
_	2.8	Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation Photocopy, Online Multiple Choice Questions):							•		
		<ul> <li>Online Examinations implemented as a part of Continuous Evaluatio</li> <li>Online Entrance Exam of PG and Ph.D. Aspirants</li> <li>Showing Assessed Answer Books of Semester End Examination to students</li> <li>Introduce Open Book Class Test in all courses of M.Tech. Program and in selected courses of MBA Programme (2<sup>nd</sup> year)</li> </ul>						to the			
			Developmen							, -	
	2.9	No. of	Faculty Me	mbers inv	olved in	Curri	culum R	Restru	cturing	g / Re	vision

# / Syllabus Development as Member of Board of Study / Faculty / Curriculum Development Workshop:

Board of Studies / Area Committees	Faculty	Curriculum Development Workshops
131	58	All Faculty Members

Note: The figure shows involvement of internal faculty members only. Several faculty members are part of both Board of Studies / Area Committees and Faculty.

### 2.10 Average Percentage of Attendance of Students:

85%

### 2.11 | Course/Programme wise Distribution of Pass Percentage :

Course/Programme wise Distribution of Pass Percentage details of June-2014 examinations are provided in Annexure-5. (The results for the ongoing academic year will be available after June 2015).

## 2.12 How does IQAC Contribute / Monitor / Evaluate the Teaching & Learning Processes:

- Each constituent institute of the University has Internal Quality Assurance Cell (IQAC), which continuously monitors all teaching-learning activities. The academic progress is reviewed on continuous basis and discussed in regular IQAC meetings.
- Structured Academic Calendar is prepared and is strictly adhered to.
- Implemented rigorous Academic Audit at personal/Individual, Institute and University level under the supervision of University level IQAC.
- On regular basis, the IQAC organizes faculty development programmes, including induction programme, orientation programme, refresher courses, research promotion activities, etc.

### **2.13** Initiatives undertaken Towards Faculty Development:

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher Courses	31
UGC – Faculty Improvement Programme	02
HRD Programmes	01
Orientation Programmes	44
Faculty Exchange Programme	00
Staff Training conducted by the University	97
Staff Training conducted by other institutions	24
Summer / Winter schools, Workshops, etc.	158
Industrial Training	06
Others (including industrial training)	48

### 2.14 Details of Administrative and Technical Staff:

Category	Number of Permanent Employees	Number of Vacant Positions	Number of Permanent positions filled during the Year	Number of Positions filled on Contractual / Temporarily
Administrative Staff	123	17	03	12
Technical Staff	103	16	02	04

### **CRITERION – III**

### 3. Research, Consultancy and Extension:

# 3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution:

The IQAC at the institute and the University level is very active in promoting the research culture in following ways:

- Separate portfolio of Research related Activities is created and a senior level professor is appointed to look after the activities.
- The IQAC took initiative to develop a scheme of incentives and awards for the faculty members for outstanding contribution in research.
- The IQAC also took initiative to devise a scheme of providing funds to the faculty members for major research projects.
- IQAC regularly organizes various workshops/ seminars on IPR issues, Research Paper/Proposal writing, two-week intensive research orientation programme, etc.
- Research Advisory Committees have been constituted to strengthen the research activities.
- With the support of IQAC, Institute of Management has organized, NICOM -International Conference on Management and ANVESH-Annual Research Conference.

### 3.2 Details regarding Major Projects:

	Completed	Ongoing	Sanctioned	Submitted
Number	1	20	8	16
Outlay In ₹ In Lacs	55.00	474.46	55.11	430.80

For details, please refer to Annexure-6A.

### 3.3 Details regarding Minor Projects:

**Funded by External Agencies:** 

	Completed	Ongoing	Sanctioned	Submitted
Number	00	25	1	14
Outlay In ₹ In Lacs	00	108.15	1.5	105.77

For details, please refer to Annexure-6B.

### **Funded by Nirma University:**

During the assessment period, seven (07) minor research projects funded by Nirma University have been completed. Also, twenty six (26) such projects are going on. The details have been listed in Annexure-6C.

### 3.4 Details on Research Publications:

	International	National	Others
Peer Review Journals	110	000	000
Non-Peer Review Journals	000	028	000
e-Journals	007	000	000
Conference Proceedings	131	045	000

3.5 Details on Impact Factor of Publications:

Details on impact ractor	or r doned to the	
Impact Factor Range	Impact Factor Average	h-index
	2.1#	Maximum =12 Minimum =1
It varies in the range of 0.1 to	# In calculating the average	
6.	impact factor, only those	
	papers are considered for	
	which valid impact factor is	
	available.	

# 3.6 Research Funds Sanctioned and received from Various Funding Agencies, Industry and Other Organisations:

## Summary of Total Grant Received (July 01, 2014 to March 31, 2015)

Nature of the Project	Total
	(in ₹ in Lacs)
Externally funded Major /Minor Projects	208.26
Industry Sponsored Projects	4.55
Projects sponsored by Nirma University	8.15
Idea Lab Projects	8.99
(other than compulsory by the University)	
Total	229.95

Note: The above details are for the financial year 2014-15 (April 01, 2014 to March 31, 2015)

### 3.7 No. of Books Published:

10. of Dooks I doubled.								
With ISBN No	16	Without ISBN No.	01	Chapters in Edited Books	06			

3.8	No. of University	v Departments	receiving	Funds f	rom:			
	UGC-SAP			Being a statutory private University, we				
	CAS			are not covered under Section 12 (B) of				
	DPE					not eligible		
				such funding from UGC.				
	DST-FIST					nas received	d a	
				funding of ₹55Lacs under FIST				
			progra	programme from the Department of				
			Science	Science and Technology, New Delhi.				
	DBT Scheme/fun	ds				receiving fu		
			from	from DST and DBT for their research			arch	
			projec	ts.				
3.9	For Colleges:		37.4					
	Autonomy			pplicable				
	CPE C. G.1			pplicable				
	DBT Star Scheme	2		pplicable				
	INSPIRE			pplicable				
	CE	(C)		pplicable pplicable				
	Any Other (special	iy)	Not A	ррисавіє	;			
3.11	<ul> <li>₹ 78.19 Lacs</li> <li>Note: Above figures are for the duration of 01/04/2014 to 20/03/2015.</li> <li>No. of Conferences Organized by the Institution:</li> </ul>							
					ı			
	Level	International 03	National 09	State 00	University 02	Institute 00		
	Number Sponsoring	Nirma Univ		00	02	00		
	Agencies	Dept. of Bio		y (DBT), l	New Delhi			
		Indian Cour	ncil of Medio	al Researc	ch, New Delhi			
		Indian Imm	0.	iety, New	Delhi			
		• GSBTM, G			echnology			
		Gujarat Council on Science and Technology  LNG P. Grandel						
		<ul><li>Gujarat Cot</li><li>LNG Petror</li></ul>		nce and Te	ciniology			
		<ul><li>LNG Petror</li><li>Adani Grou</li></ul>	net	nce and Te	emiology			
		<ul><li>LNG Petror</li><li>Adani Grou</li><li>Nirlife</li></ul>	net 1p		cimology			
		<ul><li>LNG Petror</li><li>Adani Grou</li><li>Nirlife</li><li>Founders B</li></ul>	net up ook Publishi	ng	zemology			
		<ul><li>LNG Petror</li><li>Adani Grou</li><li>Nirlife</li></ul>	net up ook Publishi	ng	Ciniology			
		<ul><li>LNG Petror</li><li>Adani Grou</li><li>Nirlife</li><li>Founders B</li></ul>	net up ook Publishi	ng	Ciniology			
3.12	No. of Faculty se	<ul><li>LNG Petror</li><li>Adani Gror</li><li>Nirlife</li><li>Founders B</li><li>Gujarat Tea</li></ul>	net up ook Publishi Processing	ng Ltd.		Persons:		
3.12	No. of Faculty se	<ul><li>LNG Petror</li><li>Adani Gror</li><li>Nirlife</li><li>Founders B</li><li>Gujarat Tea</li></ul>	net up ook Publishi Processing	ng Ltd.		Persons:		
		<ul> <li>LNG Petror</li> <li>Adani Gror</li> <li>Nirlife</li> <li>Founders B</li> <li>Gujarat Tea</li> </ul>	net pook Publishi Processing  ts, Chairp	ng Ltd.		Persons:		
3.12	No. of Collabora	LNG Petror     Adani Grou     Nirlife     Founders B     Gujarat Tea  erved as Exper	ook Publishi Processing ts, Chairp	ng Ltd. persons o	or Resource			
		LNG Petror     Adani Gror     Nirlife     Founders B     Gujarat Tea  erved as Exper	net hip hip hook Publishi hip Processing hts, Chairp hip hip hip hip hip hip hip hip hip hi	ng Ltd. persons o		Persons:		

	3.14	No. of Linkages created during this Year:										
		96										
	3.15	Total Budget for Research for Current Year (2014-15) in ₹ in Lacs :										
	3.13	From	227.08			agemen		688.		Total		15.87
		Funding	227.00			agemen ersity /	11	000.	. 1 )	Total	).	13.67
		Agencies			Institı	•						
		rigeneres		-	1115111							
	3.16	No. of Patents received this Year:										
		Ten (10) pater period.	nts filed a	and fiv	e (05	5) paten	its pub	olished	d dur	ing the a	ssess	ment
	3.17	No. of Resear	ch Award	ls / Re	cogni	itions	receix	zed by	Fac	ulty and	Rese	arch
	3.17	Fellows of the			_		1 ccci v	cu by	1 ac	arty aria	Itest	ai cii
				-,								
			International	Nat	ional	State	Unive		Dis			
		31	06	1	16	02	03	3		04	4	
-	3.18	No of Fourth	y francisco 4le e	T414	4: a	l	ma Dh	D C	:-1	~-		
	3.10	No. of Faculty	y irom the	msu	เนเเอเ	i wno a	re Pil	. D. G	uiue	S:		
						76						
						70						
		Students Regi	istered un	der P	h.D. (	Guides:	;					
						292						
	3.19	No. of Ph.D. A	Awarded 1	to the	Facul	lty fron	n the l	Institu	ıtion	:		
						0.5						
						05						
-	3.20	No. of Resear	ch Schola	rc rec	eivino	o the Fa	ellows	hing				
	3.20	110. of Iteseur	ch benota	15100	C1 V 1118	5 the r		mps.				
		Ph.D. Research	h Scholars	receiv	ing F	Fellowsl	hip fro	m Ext	terna	l Agencie	s: 26	
		Ph.D. Researc	h Scholars	receiv	ving F	Fellowsl	hip fro	m Nir	ma U	Jniversity	y: 18	
		PG Research S	Scholars re	ceivin	g Fell	lowship	from	Exter	nal A	gencies:	33	
	3.21	No. of Studen			in NS						_	
		University Level		ate		Natio			In	ternationa	al	
		Level	Le	vel		Leve	el			Level		
-	2.22	No -PG( 1	4a D4' :	n n 4 - 1	NT	70	•4					
	3.22	No. of Studen			ın NC				т	4 4 :	- 1	
		University Level		ate		Natio			In	ternationa Level	al	
		Level	Le	vel		Leve	C1			Level		
-	3.23	No. of Award	le wor in	NCC.								
	3.43	University		ate		Natio	nal		Īμ	ternationa	a1	
		Oniversity	St	att		rianol	ııaı		111	wination	aı	

	Level		Level		Level		Level	
3.24	No. of Awar	rds W	on in NCC	<b>:</b>				
	University		State		National	-	International	
	Level		Level		Level		Level	
3.25	No. of Exten	sion A	ctivities (	Organ	ized:			
	University Fo	orum			01			
	Institute Foru	ım			84			
	NCC	NCC						
	NSS				15			
	Any Other				02			

# 3.26 Major Activities during the Year in the Sphere of Extension Activities and Institutional Social Responsibility:

### **Institute of Technology:**

### **Electronics and Communication Engineering Department:**

- The students of Electronics and Communication carried out Tree Plantation and spreaded the awareness. The programme was conducted in collaboration with Shree Sainath Social Society, Jiv Daya Trust and Rameshim International Foundation, Ahmedabad.
- The students have taught Maths, English and Computer to the students of government schools, distributed water packets to the traffic police and distributed biscuits amongst poor kids in collaboration with an NGO 'YUVA Unstoppable'.
- The students carried out survey related to nutrition requirement in slum areas in collaboration with KHAO KHILAO INKRASA.
- The students have organized a quiz in the schools to create awareness in people about heritage in collaboration with Indian National Trust for Art and Cultural Heritage.
- The students have participated in creating awareness about HIV/AIDS in slums and villages.
- The students also participated in a rally of Woman Empowerment, and created awareness amongst the people.
- Electronics and Communication Engineering organized a one-day workshop on "Modern Measurement Tools and Electronics Simulation Software" for the students of ITI on January 31, 2015.

### **Instrumentation & Control Engineering Department:**

• International Society of Automation (ISA) has organised an event which aimed at fund raising for the flood affected people of Jammu & Kashmir during Oct. 06-10, 2014. ISA has also organised a community service event at Hiramani Old Age Home on August 18, 2014.

### **Electrical Engineering Department:**

• The Electrical Engineering Section has organised a one-day workshop for the students of ITI Gandhinagar on March 14, 2015 and March, 20,

2015.

• Electrical Engineering Students' Association (EESA) has organised an extension activity for villagers on Sept. 27, 2014 at Charrodi Village, Ahmedabad.

### **Computer Science & Engineering Department:**

• The students of Computer Science & Engineering Department have carried out different activities in the association with NGOs.

### **Mechanical Engineering Department:**

- Radhi Campaign (In association with NGO "Make a Difference") was carried out in Ahmedabad wherein old newspaper/books were collected and sold. The amount received was distributed amongst the poor people. Forty students and two faculty members took part in this campaign.
- An event called, 'Merchants of Ahmedabad' (In association with NGO "Make a Difference") was organized wherein various stalls were arranged and the amount collected was given to various needy people.
- Forty students and two faculty members from Mechanical Engineering Department were involved in 'Volun Teaching' in various Government Schools.
- A training programme on "Skill Development for Women Empowerment" was organized during 01/08/2014 to 31/10/2014.
- Mechanical Engineering Students' Association (MESA) and Society of Automotive Engineers (SAE) have jointly organised an event "Autocalypse 2014" during August 29-30, 2014.

### **Chemical Engineering Department:**

- Chemical Engineering Students' Association (ChESA) organised Cleanliness Drive A Cleaner Today, A Better Tomorrow on August 23, 2014 at Govt. Colony, Near Star Bazar, Ahmedabad.
- Chemical Engineering Students' Association (ChESA) has organised donation drive (old cloths, money etc.) on Oct. 12-13, 2014.

### **Civil Engineering Department:**

- The students of B.Tech. undertook 15 hours of social activities in various organisations during July to October 2014. Around 135 students undertook various societal activities.
- The department organized a trip for the students of Shilaj Primary School on February 14, 2015.

### **Institute of Management:**

- The students have taken forty projects with different NGOs.
- Under the banner of 'SARAL', uniforms, books, bags, stationery, etc. are given to the underprivileged children. The old clothes were collected and distributed to the poor people around the campus. The underprivileged kids were taken out for a picnic by the MBA students. The MBA students organized events for the underprivileged kids on friendship day, Rakshabandhan, Diwali, Holi.

- The Rotaract Club of the Institute organized several activities, including Plantation Campaign, Blood Awareness Database Collection, Big Social Idea Contest, Blood Donation Camp, Sensitizing People towards AIDS, Cleanliness Drive, etc.
- Sixty five (65) students of the BBA-MBA integrated programme completed their summer internship with thirty one (31) NGOs.

### **Institute of Pharmacy:**

- An Awareness Camp was organized at Tragad Primary School on January 17, 2015 on the theme of hygiene, cleanliness and sanitation for about 150 students. Another Awareness Camp was also organized on the same theme at Jaspur Primary School on February 21, 2015. Around 250 students attended the same.
- Cancer Signature Campaign was organized in association with Global Hospital on January 31, 2015. They explained the prevalence of different types of cancer, cause and treatment of the same.
- Induction Training for Adult Literacy Programme was organized on February 7, 2015 in association with Devi Santhan, NGO, Lucknow.
- In association with Gujarat Cancer Society for Bone Marrow Donor Registry of India (MDRI), Mumbai, blood samples of 43 persons from the Institute of Pharmacy and the Institute of Science were collected on September 25, 2014.
- Workshop on "Self-Defence for Girl Students" was organized on August 1, 2014.

### **Institute of Science:**

- M.Sc. students did data entry of 177 case files to help in digitization of data of mentally retarded members of the BM Institute, Ahmedabad.
- M.Sc. students participated in induction training organized by Devi Sansthan, an NGO from Lucknow working on Literacy for the Underprivileged Children.
- M.Sc. students started survey for the need of adult literacy in the village Jaspur.
- Donation of old clothes and other commodities to Chinmay Seva Trust, Ahmedabad.
- Diabetes Screening for members under the aegis of State Non-Communicable Disease Cell (NPCDS-NPHCE) of Commissionerate of Health, Medical Services & Medical Education, Government of Gujarat.
- M.Sc. students visited Blind People Association, Vastrapur, Ahmedabad to observe the challenges faced by differently abled individuals, expressed willingness to help them as volunteers and donated grocery items from allocated funds.

### **Institute of Law:**

- Legal Literacy Camp organized at Koba, Gandhinagar on November 09, 2014 on child labour, child marriage.
- Para Legal Training organized in November 2014, where 21 students worked to provide social service and spread awareness.

• Donating electronic items and books to the prisoners of Sabarmati Central Jail, Ahmedabad.

### **Institute of Architecture:**

 Distributed Sketchbooks and Colour Boxes the students of primary school of nearby village

### **CRITERION – IV**

### **Infrastructure and Learning Resources:**

### 4.1 Details of increase in Infrastructure Facilities:

Facilities	Existing	Newly Created	Source of Fund	Total
Campus Area	110 Acre	-	Nirma	110 Acre
Class Rooms	103	12	University	115
Laboratories	110	01		111
Seminar Halls	008	-		0008
No. of important equipment purchased (≥ 1-0 lakh) during the current year.	184	43		227
Value of the equipment purchased during the year (₹ in Lacs)	1813.42	121.35		1934.77
Others	-	-		-

### 4.2 Computerization of Administration and Library:

### **Computerization of Administration:**

- Processes from admission to alumni connect, teaching-learning to library resource management; accounts, exam and general administration have been made more effective and faster by the use of ICT
- In several constituent institutes of the University the entire admission process, right from inviting applications to counselling and payment of fees is online.
- Teaching Time Tables, Attendance Monitoring, Student Feedback, etc. are fully computerized.
- All circulars, notices, different types of forms, etc. are put online for the access of the faculty and staff members.
- Staff leave record, personal details, income tax related data, budget details are available online and can be accessed from anywhere in the campus.

### **Computerization of Library:**

• All the libraries on the University are fully computerized with user-

- friendly library web-based and open source software-KOHA.
- Online Public Access Catalogue (OPAC) is available on the Internet for inquiring the status of the resources.
- Bar-coding system is in use to computerize the bibliographic details of the resources. RFID system is in use at several places.
- Each library of the constituent Institutes of the University has a dedicated library website. The library portal facilitates access to digital resources, like journals, magazines, videos, CDs, etc. The library homepage provides a single window to all the resources and services of the University library.
- The library has upgraded Remote Login Software with RemoteXs software. It provides easy interface for e-library (contains of all eresources) to the users.

### 4.3 Library Services:

Particulars	F	Existing	Nev	vly Added	Total		
	No.	Value (₹)	No.	Value (₹)	No.	Value (₹)	
Text Books	88640	3,37,25,206/-	3527	25,69,357/-	92,167	3,62,94,563/-	
Reference Books	13519	4,25,37,637/-	291	10,17,055/-	13,810	4,35,54,692/-	
e-Books	617	2,85,518/-	98		715	2,85,518/-	
Journals	663	34,66,332/-	636	35,82,855/-	641	1,02,49,909/-	
e-Journals	14209	1,32,59,640/-	15251	1,05,98,318/-	15,429	1,41,18,791/-	
Digital Database	22	34,37,867/-	19	29,62,957/-	22	40,31,605/-	
CD & DVD	1560	17,21,825/-	117	3,35,339/-	1677	20,57,164/-	
Videos	85	19,65,873/-	52		137	19,65,873/-	
Others (Bound Volumes)	2737	26,11,541/-	212	3,18,990/-	2949	29,30,532/-	

Note: Periodical, E-journals, Databases are subscribed/renewed annualy.

### 4.4 Technology Up gradation (overall):

- Increased internet bandwidth from 128 Mbps to 256 Mbps.
- Up gradation of MATLAB software.
- Received updated version of HTRI 7.0 used for Heat Exchanger Design.
- Upgradation of Magnet v7.5 Software.
- Motorsolve software upgraded to version 4.1.
- PSCAD software upgraded to version 4.5 from 4.4.
- 25 Licences of Xilinx Vivado Tool procured for M.Tech. Embedded Systems.
- FPGA kit with SDR capabilities procured in M.Tech. Communication Engineering.
- Cisco router, Wi-Fi access point cum router and Layer-2 and Layer-3 switches are added for computer networking experiments.

- Purchase new software Encase for cyber security and Rational SEED for software engineering.
- Replaced many computer systems with latest hardware. Additional computers are procured for UG and PG students.

# 4.5 Computer, Internet access, Training to Teachers and Students and any other Programme for Technology Up-gradation (Networking, e-Governance etc.):

All the class rooms/tutorials/faculty/staff rooms are connected with internet. The entire campus of the University is Wi-Fi enabled. All the faculty members are given Laptops with internet connection. The faculty members are trained from time to time for the use of latest tools, technology, software, etc. Some of the details are given below:

- The faculty members were trained for course website and course blog development.
- Training to the faculty members is provided as a part of MOU with Mitsubishi Electric Pvt. Ltd.
- Training on Dynaform Software conducted during 13/03/2015 to 14/03/2015 for the faculty members.
- Spoken tutorials were conducted on Scilab platform for the M.Tech. students.
- The Institute of Management has organized a half day Cyber Security workshop for the students. The Institute also organized a basic awareness session for students on, 'LMS-MOODLE'. Apart from these, two separate workshops were conducted by simulation teams of Tata Simulations and Harvard Simulations.

4.6 Amount Spent on Maintenance:

Timount Spene on Mannechance.	
Item	Amount Spent (in ₹ in Lacs)
ICT (Computers):	11.27
Campus Infrastructure and facilities:	147.69
(Including Buildings)	
Furniture:	23.49
Equipment:	37.08
Others:	
TOTAL	219.53

### **CRITERION – V**

# 5.1 Contribution of IQAC in Enhancing Awareness about Student Support Services: For enhancing the awareness about various student support services, the student representives are made part of the IQAC. Information about different support schemes are given to all the

students during orientation programme as well as from time to time by circulars. Apart from these, the Heads of the Institutes, Heads of the Departments and Faculty Advisors hold meeting from time to time to make the students aware about support services and to know their problems.

- With the initiative IQAC, the University has devised a well-defined mentoring policy to support the students for sharing their problems related to academic and non-academic matters.
- The University has personal enhancement and development schemes for its students, which includes career counselling and soft-skill development.

### 5.2 Efforts made by the University for Tracking the Progression:

- Continuous evaluation system for checking and reviewing the academic progress.
- Academic reviews are conducted twice during the semester to measure the progress.
- Mentoring of all the students is conducted from time to time to help them to maintain the academic progress.
- Regular meetings are conducted with the students, who are academically weak.

### **5.3** (a) Total Number of Students:

UG	PG	Ph.	Others #	Total
		D.		
4745	1894	346		6985

### (b) No. of Students Outside the State:

1970

### (c) No. of International Students:

104

Men Women

**No.:** 4843 **No.:** 2142

**%:** 69.33 % %: 30.67 %

### **Category wise Students:**

This Year (2013-14)*					Tl	nis Ye	ar (201	4-15)*			
General	SC	ST	OBC	Physically	Total	General	SC	ST	OBC	Physically	Total
				Challenged						Challenged	
2203	72	45	383	10	2713	2134	55	29	213	11	2442

<sup>\*</sup>Based on new admission data

<b>Demand Ratio:</b> 1:12 <sup>&amp;</sup>	Dropout: 5.8 %
	For pass out batch 2014.
&Considering the admissions offered	
by Nirma University	

# 5.4 Details of student support mechanism for coaching for competitive examinations (If any):

The constituent institutes of the University and Centre for Continuing Education (CCE) help the students prepare for various competitive exams. These include:

- The Centre for Continuing Education conducts coaching for GATE Examination.
- The Institute of Pharmacy provides Pre-GPAT coaching and examination to the B.Pharm. students.
- The Institute of Technology arranges Guidance Seminars for GATE/GRE through its students' associations.

No.	of Student Beneficiaries:	53

### 5.5 No. of Students Qualified in these Examinations:

NET	04
SET/SLET	
GATE	70
CAT	291
IAS/IPS	
State PSC	
UPSC	01
Any Other	162
	(Including GPAT, PG-CLAT, GRE,
	TOEFL, etc.)

### **5.6** Details of Student Counselling and Career Guidance:

### **Student Counselling:**

The University has a well-defined mentoring policy to support the students for sharing their problems related to academic and non-academic matters. The mechanism of counselling / mentoring is described below:

- As per the University mentoring policy, each faculty member is assigned a group of students to advise/guide for the duration of their study on the campus. This ensures participation of all the faculty members in the mentoring and student support process.
- After group allocation, the mentor plans for a preliminary meeting with the students. During this meeting, the students are briefed about the mentoring process and ask them to fill their basic information in a mentoring form.
- The faculty mentors maintain a separate file for all the students assigned to them and keep a record of all the details. The Mentors

- meet and interact with the students at least twice during the semester.
- Based on these interactions, the mentor classifies the students into three categories, namely: slow, advanced and weak learners. Depending upon the category of the students, he/she is guided to grow and develop. The mentor provides necessary encouragement to the advance learners to excel. At the same time, he helps the slow and weak learners to solve their difficulties.
- The summary reports of mentoring are sent to the concerned Head of the Department / Section Head.

### **Career Guidance:**

- Career Counselling workshops are organized by the Placement Cell of the University. Alumni and industry experts are invited to talk about various career opportunities in different industries.
- The University classifies the students based on the recruiters' feedback about their subject fundamentals, soft skills, analytical skills, communication, etc. Accordingly, the students are guided in the required areas. If necessary, additional material / classes are arranged to help such students.

**No. of Students Benefitted:** All students

### **5.7** Details of Campus Placement:

	Off Campus		
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
140	1473	729*	#

<sup>\*</sup> The campus placement activities are still going on. More students will be placed by the end of placement season.

### **5.8** Details of Gender Sensitization Programmes:

### **Institute of Technology:**

• A self-defence workshop of three days was organised for the girl students of all PG programmes during February 2015.

### **Institute of Management:**

- Four mailers were issued on gender issues and the interaction was kept with these mailers so as to encourage them to post their comments and views on gender related issues at work.
- Two videos were released on "gender in campus", wherein fictitious stories on probable issues were video-graphed and premiered. The stories in the video were left incomplete. The students were mailed these videos and asked to complete the stories. A leading local NGO

<sup>#</sup> The constituent institutes of the University provide campus placement facility to the students. However, the University does not get data of the students placed off campus.

- volunteered to join hands and their CEO screened all videos and stories and announced the prize winners. Collection of these stories was displayed in Library for a week. These videos were also screened at mess from time to time.
- A number of staff members, faculty and students participated in the gender sensitivity workshop organised by the University.

### **Institute of Pharmacy:**

• A self-defence workshop was organized for the girl students and ladies faculty and staff members of the Institute on August 01, 2014 and September 12, 2014.

### **Institute of Science:**

- A Guest Lecture on "Women & Science" delivered by Dr. Akanksha Chaturvedi, IISER, Pune on September 06, 2014 to encourage the girl students to pursue higher education and to make career in Science.
- A self-defence workshop was organized jointly with the Institute of Pharmacy.
- The Women Development Cell, of the Institute organised, Essay Writing and Short Story Competition on September 22, 2014 to promote Gender Equality in the society.

### **Institute of Law:**

- The Institute under the Women Development Cell (WDC) of Nirma University organized a One-day Workshop on Gender Awareness on December 27, 2014. Ms. Flavia Agnes, renowned Feminist and Activist from Mumbai was one of the Key-note speakers of the workshop and delivered the lecture on the topic "Gender at Workplace and Inclusion and Exclusion-A Gender Perspective". The other key note speaker, Mrs. Meera Ramniwas, Inspector General of Police (Women Cell in CID-Crime) delivered lecture on the topic "Sensitizing Civil Society to Gender Concerns". Faculty and staff members from among all the institutions under the University participated in the workshop.
- The Institute organised a four day self-defence workshop during January 13-20, 2015. The workshop was conducted with the help of Rushiraj Krate Kunfu Federation, Ahmedabad. The girl students of the Institute participated in the workshop. The workshop was organised keeping in view the growing importance of the physical fitness, exercise and self-defence in today's time.
- The students conducted Gender Sensitization Workshops at various schools, universities in the vicinity of Ahmedabad city to raise the awareness on gender equality. Twenty eight (28) programmes/workshops were conducted during the months of August and September 2014.

### 5.9 Students Activities

5.9.1

No. of Students Participated in Sports, Games and Other Events:

State/ University Level	802
National Level	37
International Level	1

### No. of Students Participated in Cultural Events:

State/ University Level	403
National Level	29
International Level	

### 5.9.2

# No. of Medals / Awards Won by Students in Sports, Games and Other Events:

### **Sports:**

State/ University Level	76
National Level	08
International Level	

### **Cultural:**

State/ University Level	40
National Level	12
International Level	

### **5.10** Scholarships and Financial Support:

Particulars	Number of Students	Amount (₹ in Lacs)
Financial support from institution (including Scholarship, Fellowship and Stipend)	857	406.93
Financial support from government	255	163.86
Financial support from other sources	003	9.00
Number of students who received International / National recognitions including DST-Fellowship, CSIR-Fellowship and UGC Fellowship	009	19.07
Fellowship From Sponsored Project	022	28.37

Note: The above details are the expenditure incurred from 01.04.14 to 20.03.15.

## 5.11 Student Organised / Initiatives:

### Fairs:

State/ University Level	10
National Level	18
International Level	03

### **Exhibition:**

	State/ University Level	64	
	National Level	40	
	International Level	03	
5.12	No. of Social Initiatives Undertaken by the Students:		
	93		
5.13	Major Grievances of Students (if any) Redressed:		
	No major grievances received from the stud	dents.	

## CRITERION – VI

Vision Shaping a better future for mankind by developing effective and responsible individuals and organizations.  Mission Nirma University emphasizes on all round development of its studen at producing not only good professionals, but also good and worthy a great country, aiding in its overall progress and development. It endeavours to treat every student as an individual, to recognize their and to ensure that they receive the best preparation and training for their career ambitions and life goals.  6.2 Does the University has a Management Information System:  Yes. A new and improved Management Information System is under the implementation.  6.3 Quality Improvement Strategies Adopted by the University for example of the implementation.	Governance, Leadership and Management:				
Shaping a better future for mankind by developing effective and responsible individuals and organizations.  Mission Nirma University emphasizes on all round development of its studen at producing not only good professionals, but also good and worthy a great country, aiding in its overall progress and development. It endeavours to treat every student as an individual, to recognize their and to ensure that they receive the best preparation and training for their career ambitions and life goals.  6.2 Does the University has a Management Information System:  Yes.  A new and improved Management Information System is under the implementation.  Guality Improvement Strategies Adopted by the University for expollowing:  6.3.2 Teaching and Learning:	State	6.1	State the Vision and Mission of the University:		
Shaping a better future for mankind by developing effective and responsible individuals and organizations.  Mission Nirma University emphasizes on all round development of its studen at producing not only good professionals, but also good and worthy a great country, aiding in its overall progress and development. It endeavours to treat every student as an individual, to recognize their and to ensure that they receive the best preparation and training for their career ambitions and life goals.  6.2 Does the University has a Management Information System:  Yes.  A new and improved Management Information System is under the implementation.  Guality Improvement Strategies Adopted by the University for expollowing:  6.3.2 Teaching and Learning:	Vicia		Vision		
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6.3.2 Teaching and Learning:	_	6.3	Quality Improvement Strategies Adopted by the University for each of		
The University lays great emphasis on student centric teach	1.0.2		0.5.2 Teaching and Dearming.		
	•		The University lays great emphasis on student centric teaching rat		
			than a teacher centric learning. Implementation of learner cent		
teaching is made feasible by a well-developed system of Out					
Based Education (OBE) from the year 2013.					
	•		Formal and informal feedbacks are obtained from various stake hold		
			and the same are discussed during different meetings. Where		
required, based on the feedback, necessary actions are taken.			± • • • • • • • • • • • • • • • • • • •		
• For most of the courses, the course coordinator prepares a copage / blog for the course and all the enrolled students are	•		• For most of the courses, the course coordinator prepares a course w		

- visit the same and interact.
- Use of ICT for improvement in teaching learning. Blogs/Course websites are created and used for 24X7 learning.
- Process of rigorous Academic Audit is implemented.
- More of practical and field exposure is given to the students.

### **6.3.3** Examination and Evaluation:

- The University has adopted Continuous Evaluation scheme for all the programmes.
- Rubrics are prepared for the evaluation of various components of the course.
- The University has a very systematic Manual for Conduct of Examinations.
- Open book tests are conducted in many courses.
- All the students are provided 'Student Handbook', which includes all the rules and regulations of examination.
- For each subject /course of semester end examination, the Paper Setters submit two sets of the question papers and out of these two sets, the Dean and the Executive Registrar pick up any one and the same is used for the purpose of the respective examination.
- In order to deal with the cases of examination malpractice, a separate 'Examination Reforms Committee' is appointed by the Director General.
- For smooth and fair conduction of the semester end examinations, along with the senior supervisors, observers are appointed by the University.
- Provision is also made to show the assessed answer books of sessional as well as semester end examinations to the concerned students.
- In order to check the quality of the question papers, all the question papers are reviewed by a separate committee and the reports are presented during the Board of Studies Meetings.

### **6.3.4** Research and Development:

- Overall at the University level, Faculty of Doctoral Studies and Research (FDSR) and Academic Development & Research (ADR Cell) monitor and facilitate the research activities.
- The University has framed a very systematic 'Research Policy' which provides guidelines for all research related activities.
- Department wise brochures indicating strengths of the department in consultancy and research activities are published. Separately Annual Research Reports are also prepared.
- The University provides funding for major and minor research projects.
- The University provides financial support to faculty for attending national / international conferences abroad/within India.
- Encouraging faculty members to undertake collaborative / sponsored projects.
- The University regularly organizes international /national Conferences.
- Availability of modern library facilities including e-journals and other latest Learning Resources have provided great support to Ph.D., PG and

UG students.

• Extensive Research Orientation Programmes and Refresher Programmes are organized on regular basis.

### **6.3.5** Library, ICT and Physical Infrastructure / Instrumentation:

- Each constituent Institute of the University houses Library Resource Centre well stocked with online Journal Packages like IEEE/IET, ACM digital library, ASCE, Science Direct, Online Databases; Offline Databases; Print Periodicals; Video Cassettes; Audio Cassettes; Bound Volumes and electronic media like CDs & Floppies; industry relevant reports, standards; annual reports; magazines, newsletters, etc.
- An automated set-up with user-friendly portal providing a single point access to e-resources, the Libraries have a rich collection on various subjects like management, business, technology, pharmacy, sciences, law, etc.
- Each Institution on the campus has independent outstanding infrastructure comparable to the world renowned universities. Some of the features include state-of-the-art laboratories, air-conditioned auditoriums, amphitheatre ICT enabled classrooms, spacious seminar halls with excellent accessories for interaction, Wi-Fi enabled campus, recreational facilities, etc.

### **6.3.6 Human Resource Management:**

- The University gives a lot of emphasis on Human Resources Development, especially faculty development. The University provisions for faculty development include deputation for higher studies with full salary, travel grant for international/national conferences, seed money for research, in service registration for Ph.D., sabbatical leave, organizing international/national conferences, liberalized consultancy rules, etc.
- The HR policies are at a par with or better than those of any other government or government-aided university. Some of the highlights are: mediclaim, medical allowance (for outdoor patients), children education allowance, relocation allowance, allowance for purchase of books /magazines/subscription towards journals, professional membership, career advancement schemes for non-teaching staff, leave travel concession, etc.
- Since inception, the University has given utmost importance to the professional development of teaching and non-teaching staff. It is covered under three categories, namely (i) Faculty Qualification Improvement Programmes, (ii) Faculty & Staff Development Programmes (iii) Funding for Research Activities.
- Considering the importance of Faculty and Staff development activities, the University has set-up its own system of 'Faculty Development' under the supervision of a Core Committee headed by the Director General. A senior professor is given charge of organizing and monitoring such activities. The Faculty Development Programmes are

arranged in four different categories, namely (i) Induction Training Programme of 4 weeks for newly recruited faculty members before they go for class-room teaching, (ii) Orientation Programme of 2 weeks for teachers having 2-5 years of teaching experience, (iii) Refresher Course of 2 weeks, and (iv) Research Orientation of 2 weeks.

### **6.3.7** Faculty and Staff Recruitment:

- One of the important goals of the University Strategic Plan is Human Resource Planning and Development. Accordingly, faculty recruitment and development is taken very seriously and a thorough planning is being done.
- Advertising the vacant faculty positions with wide publicity at the international level, offering attractive packages and academic flexibilities to the deserving candidates are the key components of faculty recruitment.
- All regular appointments on the post of faculty are normally being done based on merit by inviting applications through public advertisements in the national level newspapers / advertisement on the University website.
- The University has made provision of appointment through Campus Interviews to be arranged in reputed and leading Institutes of Higher Learning.

### **6.3.8** Industry Interaction / Collaboration:

- Industry Institute Interaction is covered in the University Strategic Plan. Hence, it is proposed to identify the potential industries and to approach them for consultancy, testing, training, etc.
- The University has included several reputed research organizations as the recognized Ph.D. Research Centres. The Director General and the HOIs regularly visit these organizations as well as invite their officials to the University campus for discussion and collaboration.
- The industry experts and corporate professionals are nominated as members of various statutory bodies, like Board of Governors, Academic Council, Faculties, Board of Studies/Academic Area Committees, etc. This arrangement gives all the University leaders an opportunity to interact with the industry personnel.
- The constituent institutes of the University provide customized consultancy services to the industry on live problems.

### **6.3.9** Admission of Students:

• The University has a transparent process for admissions to all the programmes at all its constituent institutes. Each programme is governed by its academic regulations. *Inter alia*, academic regulations have norms and standards for admission in each programme. The concerned officials follow admission regulations strictly and ensure transparency.

	<ul> <li>For meticulously conducting the various procedures of admissions, an Admission Committee for each institute is formed. Further, wide publicity is ensured by placing advertisements in leading national and regional newspapers. Brochures of the programmes are prepared that consist of eligibility criteria and the process of admission. In general, admissions are done using national level entrance tests. When such tests are unavailable, the University conducts its own entrance tests.</li> <li>It is pertinent to mention that in B.Tech. and B.Arch. programmes, the University can admit only 50% students. The rest 50% students are admitted through Admission Committee for Professional Courses (ACPC), a committee formed by Govt. of Gujarat. Similarly, 85% students are admitted in B.Pharm. programme through ACPC.</li> <li>The procedure and criteria for admissions to various programmes are displayed on the website in advance. All relevant information, including merit list is made available from time to time on the website of the University. Transparency in the admission procedure is thus ensured.</li> </ul>			
6.4	Welfare Schemes for:			
	Teaching  Non-Teaching  Students	<ol> <li>Reimbursement of expenses towards tuition fees for the employees' dependent children</li> <li>Reimbursement of expenses towards hospitalization</li> <li>Reimbursement of expenses towards purchase of books/ magazine/ subscription of journals / membership etc.</li> <li>Reimbursement of expenses towards LTC</li> <li>Expenses towards recreation activities</li> <li>Expenses towards medical allowances</li> <li>Reimbursement of expenses towards tuition fees for the employees' dependent children</li> <li>Reimbursement of expenses towards hospitalization</li> <li>Reimbursement of expenses towards LTC</li> <li>Expenses towards recreation activities</li> <li>Expenses towards medical allowances</li> <li>Scholarships based on Merit</li> <li>Scholarships based on Merit cum Means</li> <li>Interest on Bank Loan</li> <li>Needy Student Fund</li> <li>Book Bank Facility</li> <li>Stipend to the meritorious masters as well</li> </ol>		
		as full-time Ph. D. students		
6.5	Total Corpus Fund Generated:  ₹ 10 Crores			
6.6	Whether Annual Financial Audit has	been done:		
	Yes			
6.7	Whether Academic and Administrative Audit (AAA) has been done?			
		` ,		

	Audit Type	Ext	ternal	Internal			
		Yes/No	Agency	Yes/No Authority			
	Academic	Yes	External Experts are involved	Yes	Members Nominated by Institute Heads and Representatives of the University Nominated by Director General		
	Administrative	Yes	External Auditors	Yes	Internal Auditors		
6.8	Does the Univers	ity/ Autoi	nomous Co	college declares results within 30 days?			
	For UG Programme	es		Yes	Ţ.		
	For PG Programme	S		Yes			
6.9	<ul> <li>What efforts are made by the University/ Autonomous College for Examination Reforms?</li> <li>The University has constituted an Examination Reforms Committee with one faculty representative from each Institute. This committee meets regularly and deliberates examination reform related issues.</li> <li>The committee also looks after the cases of malpractice by the students during the examinations. For all such cases, the said committee carries out the necessary investigation and submits a detailed report to the concerned Head of the Institutions with recommendations of punishment, if any. Based on the recommendations of the committee, the Head of the Institution issues the necessary order of punishment.</li> </ul>						
6.10	What efforts are affiliated/constitu		-	iversity to promote autonomy in the			
	<ul> <li>The University offers full-autonomy to all its constituent institutes with respect to all academic matters. In all academic bodies like, Board of Studies, Area Committees, Faculty and Academic Council, Facult Members, Deans and the Head of Departments are the members. The have full autonomy as far as academic decision making is concerned.</li> <li>As far as administrative matters are concerned, well-defined delegation of powers are given under the University regulations. The Head of the Institutes, Heads of the Departments are also given financial as well a administrative powers.</li> </ul> Activities and Support from the Alumni Association:						
6.11							
	Some of the activity  Expert lecture  orientation  The Alum	ties of Ale tures from program ni provide	umni Assoc n alumni m mes, pre-pla e feedback o	University have their alumni associations. sociations are listed below: members throughout the year and in the placement talks, etc. k on syllabus updating. ging special workshop seminars, STTPs,			

Conferences on advanced topics.

- Representatives of Alumni Associations participate as members of IQAC.
- Alumni Association of the Institute of Technology publishes a magazine SETU every year.
- Representatives of the Institute of Management alumni participate in selection of the students for MBA programme.
- Financial assistance for students' participation in national/state level paper presentation is provided by the Pharmacy Alumni Association.
- Scholarships are given by the Institute of Technology Alumni Association.
- Felicitation of toppers by the Institute of Pharmacy Alumni Association.

### **6.12** Activities and Support from the Parent – Teacher Association:

 The University does not have any formal Parent Teacher Association. However, the University regularly takes feedback from the parents about the academic structure and processes and incorporates their suggestions while making plans and strategies.

### **6.13** Development Programmes for Support Staff:

Support staff is provided in-house training and are also sent for training programmes to external agencies. The brief summary of such programmes is given below:

- The Institute of Technology has conducted an in-house training programme for the support staff, where various University Regulations were discussed.
- The Institute of Management has deputed several support staff to attend training programmes, including Workshop on, 'Plagiarism: Problem and Challenges', Seminar on, 'Libraries and Education –Vision 2020', Training Programme on, 'Configuration and Management of Digital Library using DSpace', Workshop on, 'Liberating Structures for LIS Sector'.
- The Institute of Pharmacy has conducted a two-days training programme on, 'Professional Etiquettes' for Non-Teaching Staff, during September 15-17, 2014.
- The Institute of Science has encouraged the support staff to take up English Proficiency Test.
- The Institute of Law has nominated several staff members for attending soft-skill development programmes.

### 6.14 Initiatives taken by the University to make the Campus Eco-Friendly:

The University gives the utmost importance to its environment. It keeps the campus sylvan and pollution free and takes care of the entire campus through various measures. Some of them are listed below:

• The green environment is maintained consciously by planting the

- various types of plants. Over the years, the trees have grown up and the green coverage has gone up.
- All attempts are being made for the minimal consumption of energy in the campus.
- The water is supplied in all water rooms through press cock, which is an auto off type of cock, thus ensuring no wastage of water. A sewage treatment plant, using Fluidised Media Reactor (FMR) technology having 400 m³ per day operating 24 hours with a designed flow rate of 16.66 m³ per hour, has been installed. The treated water is used for low end purposes, such as in toilets for flushing, gardening on the campus etc.
- An Organic Waste Converter Machine (OWC), having the capacity of 50kg per batch with batch time of 10 to 15 minutes, the power consumption of 8HP and area occupation of 3m x 4m, is installed and it treats waste food and dry leaves/dry flowers, etc. converting it into organic manure, which is used in maintaining the gardens in the campus. The fertilizer output from the machine in terms of kg is about 60% to 70% of the input (Waste) in terms of kg.
- Dustbins (around 225 in number) are kept on the entire campus for collecting the different kinds of wastes.
- On the campus, there is a lake, spread over approximate 8,000 sq.mt. area and having an average depth of 25 feet. The rain water collected from the campus is stored in the lake. There are five percolation wells constructed (as per the specifications given by Ahmedabad Municipal Corporation) to percolate the collected water from the campus.
- To prevent carbon emission and to provide pollution free atmosphere, the University buses fetch most of the students, faculty and staff members to the University, thus avoiding the use of individual vehicles by the faculty, staff and students.
- Wherever possible, communication is done through Email, thus preventing the use of papers. All the employees are advised to make use of papers, only if necessary.
- The campus has almost 81 different types of trees with total number of trees around 3,773. There is also medicinal plants garden in the campus, with 156 different varieties.
- An incineration is used for the disposal of animal waste and efficient exhaust system is used to make the campus free from pollution. Autoclaving techniques are used for management of microbial waste for biosafety.
- All the old and out dated computers and peripherals are disposed of under the buyback scheme by replacing them with new ones.
   However, those components and parts which can be used in other systems are kept aside for the future use.

### **CRITERION – VII**

### 7. **Innovations and Best Practices:** Innovations introduced during this academic year which have created a positive impact on the functioning of the institution: Introduction of Academic Audit at all the Institutes. Structured Training Programme under ADR Cell for the faculty members. Encouragement towards attending MOOC courses. Design of Rubrics for course evaluation. Provide the Action Taken Report (ATR) based on the plan of action 7.2 decided upon at the beginning of the year: The University has adopted a philosophy of 'Outcome Based Education (OBE)' from year 2013. It was decided to finalize the course wise assessment techniques. Academic Audit is conducted on a regular basis. The University Quality Policy and IT Policy were prepared, discussed and finalized by different academic bodies. The 'Code of Ethics for Research' was prepared, discussed and finalized by different academic bodies. Two-week Faculty Orientation Programme and one-week Research Orientation Programme conducted during the assessment period. 7.3 Give two Best Practices of the University: For details, please refer to Annexure-7. 7.4 **Contribution to Environmental Awareness / Protection:** The students of all the constituent institutes of the University are made wellaware of the need for the preservation of the environment, eco-friendly system, conservation of energy in the form of electricity, water, etc. through: Environment related courses in the Curriculum Seminar, workshops, and frequent Awareness Programmes ii) iii) Participation in plantation of plants both normal and medicinal ones 7.5 Whether environmental audit was conducted? The University has constituted a committee for conducting Green Audit of the University. The audit is conducted by the committee on a yearly The green environment is maintained by planting various types of plants which has resulted over the years as grown up trees. All the constituted institutes of the University are offering various programmes in their regular curriculum which deal with environment protection, pollution control, etc.

		<ul> <li>All attempts are being made for minimal consumption of electrical energy and conservation of water in the campus.</li> </ul>				
	7.6 Any other relevant information the institution wishes to add:					

### 8. Plans of the University for Next Year:

- To strengthen linkages with reputed industries and academia
- Assurance of learning through suitable assessment techniques
- To implement the scheme of Awards and Incentives for the faculty members
- To implement the scheme of funding for Major Research Projects
- To increase Publications, Patents, etc.
- To strengthen Academic Audit at all levels
- To strengthen the activities of Faculty Development Programmes

Dr Dhaval Pujara Name & Signature of IQAC Coordinator

Dr Anup K. Singh Name & Signature of IQAC Chair Person

## ANNEXURE 1

## Workshops / Seminars Organized by the IQAC

Sr. No.	Name of the Institute	Title / Theme of the Programme	Programme Level	Date of Programme	Programme Duration (in hrs)	Number of Participants
1.	Institute of Technology	NAAC Awareness Session	In-house	15/11/2014	3	~200
2.		Session on, 'Open Book Test'	In-house	21/03/2015	1	~150
3.	Institute of Management	Data Analysis (by Prof. Arnab Laha, IIM- Ahmedabad)	In- house	05/02/2015	2	35
4.		Brand Wealth – Workshop on Brand Building by Cogito FCB- ULCA, Mumbai	In-house	19/02/15 to 21/02/2015	15	21
5.		Seminar on, "How to get papers published in reputed journals?" (by Dr Anil Kumar, IIM-Ahmedabad)	In-house	01/01/2015	1	46
6.		Developing Rubrics (by Prof. P. K. Chugan, IMNU)	In-house	24/07/2014	1	43
7.		Seminar on, "Research Proposal for Publications" (by Prof. Parthasarthy, CEPT University)	In-house	23/08/2014	3	40
8.		Seminar on, "Assurance of Learning" (by Prof. Nina Muncherji, IMNU)	In-house	07/08/2014	1	47
9.	Institute of Pharmacy	Faculty Development Programme (STTP)	National	30/06/2014- 12/07/2014	6 hrs/ day for 15 Days	25
10.		Citation Management – Hands-on Practise and Lecture	In-house	13/07/2014	3	23

11.		Lecture on, "Impact of Blended and Collaborative Learning"	In-house	16/09/2014	2	25
12.		Two days Training Session on, "Professional Etiquettes for Non-Teaching Staff"	In-house	15/09/ <del>2015</del> 2014 & 17/09/2014	2 hours/day	22
13.		Workshop on, "Assessment based on Rubrics"	In-house	12/03/2015	3	23
14.	Institute of Law	Workshop on, "Course Website / Course Blog Development"	In-house	01/01/2015	3	34
15.		Faculty Recharge Programme	In-house	24/12/14 to 02/01/15	29	36
16.	Academic Development & Research Cell	Research Orientation Programme	In-house	15/12/2014 to 20/12/2014	32	27
17.		Faculty Orientation Programme	In-house	18/12/2014 to 31/12/2014	64	32

# **Analysis of Feedback received from Various Stakeholders**

### A. Brief Report on Feedback obtained from Alumni

- Overall feedback of the alumni about the University Infrastructure, Library, Computer Centre, Canteen, Student Section, Transpiration facilities is very much satisfactory.
- The Alumni requested to arrange more expert lectures by renowned industry/corporate experts. Alumni members of the Institute of Law have suggested involving more experts and practicing lawyers in the course delivery process.
- The Alumni with engineering background have suggested including more courses of industrial relevance in the curricula. They also requested to put more emphasize on hands-on training, project based learning, etc.
- The students may be trained for soft-skills, competitive exams, etc.
- Collaboration with reputed industries, research organizations should be increased.
- The Alumni have suggested adding several advance courses / topics in the curricula, wherever possible.

### **B.** Brief Report on Feedback obtained from Parents

- In general the parents have given excellent rating for the course curricula, teaching-learning process, student support mechanism, infrastructure, etc. They also appreciated the efforts, the University is putting in for the overall development of the students.
- The parents have suggested including more soft-skill based courses and professional training for placement readiness.
- Several parents have suggested to include courses, like Renewable Energy, Nano-Technology, Multimedia Programming, Mobile and Web Application Development, Scripting language like Linux and PERL, etc. wherever applicable.

### C. Brief Report on Feedback obtained from Employers

- Overall, the employers/ recruiters have very positive impression about the quality of the students. According to the employers, the students of Nirma University are much disciplined, well-mannered, polite and technically sound. They are very much satisfied about the syllabus of various courses.
- More emphasize should be given to strengthen the subject fundamentals, problem solving abilities.
- The students should be provided training on Effective Communication, Presentation, Facing Interviews, etc.

### D. Brief Report on Feedback obtained from Students -Passing Out Batch

- Majority of the students are satisfied with the infrastructure, laboratories, library and computer facilities, available learning resources, gym and sports facilities, etc.
- The students are very much satisfied with the teaching-learning activities, extraand co-curricular activities.

- The students have requested to provide more exposure of soft-skills, including Personality Development, Aptitude Tests, Group Discussions and Interview Techniques, etc.
- The students have also suggested including several advanced courses/topics in the curricula.
- It was suggested to arrange more industrial/field visits to provide knowledge on the current industrial trends & technologies.
- Various Sport Clubs may be started.
- The students have requested to provide more time for reading, discussion and reflection.

# **Innovative Processes adopted by the Institution in Teaching and Learning**

Name of the Institute	Innovative Practices
Institute of Technology	<ul> <li>Use of Spoken Tutorials, Virtual Labs, NPTEL Videos, etc.</li> <li>Discussion through Blogs to ensure 24X7 learning</li> <li>Displaying Topic/Course related videos in the classroom</li> <li>Demonstrating Devices/Instruments in the classroom for the courses not having laboratory components</li> <li>Project based Learning</li> <li>Learning through Seminars and Case Studies</li> </ul>
Institute of Management	<ul> <li>Every course offered in the MBA programmes emphasised on learning over teaching through assessed components such as field / group projects and individual / group assignments. These are over and above the conventional assessment components such as quizzes, class tests and hall exams.</li> <li>The Institute emphasised case methodology and simulations in its pedagogy, which comprises of intensive pre-class preparation, which requires background research and analysis, in class discussions rather than chalk-and-talk mode and post class reflection on the managerial decisions.</li> <li>Live projects are encouraged in courses such as dissertation, business plans, managing social projects as well as many electives and core courses. Field projects have been strengthened through changes in the evaluation and feedback mechanism.</li> <li>Conducted Soft Skills &amp; application based Workshops for the students to improve quality of placement in terms of salary and job profile.</li> <li>Quality enhancement by organizing workshops like Business Analytical, Big Data, Analysing Financial Statements, Entrepreneurship &amp; New Venture Creation, Sales Management, Mind Mapping, Excel, Business Etiquette, Design Driven Innovations, Habits of Highly Effective People, and Cyber Security, etc.</li> <li>Industry visits were organised for the students to Adani Wilmar, Adani Power, Mudra Port, IFFCO, AMUL and KPTL</li> </ul>

Institute of Pharmacy	<ul> <li>Massive Online Open Courses (MOOCs) were made compulsory for 2<sup>nd</sup> year M.Pharm. students.</li> </ul>
	<ul> <li>OBE based syllabus revision for B.Pharm. and M.Pharm. programmes</li> </ul>
Institute of Science	Course assessment through rubrics.
	<ul> <li>Industry and alumni involvement in teaching and learning.</li> </ul>
Institute of Law	Use of Course Website
	Use of Experiential Learning Mechanism
	<ul> <li>Assessment Rubrics for mapping the progress of the student.</li> </ul>
Institute of Architecture	<ul> <li>Adopted a philosophy of 'Learning to build and building to learn' in teaching and learning process.</li> </ul>

# **Course / Programme wise Distribution of Pass Percentage**

Students Appeared   Distinction   J	Title of the Programme	Total no.		Ι	Division		
Civil Engineering   R.Tech.   70   35.71   34.29   20.00   0.00   90   90		Students					
B.Tech.   70   35.71   34.29   20.00   0.00   90	B.Tech.	66	39.39	37.88	21.21	0.00	98.48
Chemical Engineering   B.Tech.   74   54.05   32.43   12.16   0.00   98.64	Civil Engineering						
B.Tech.   Mechanical Engineering   Mechanical Engineering   B.Tech.   Electrical Engineering   B.Tech.   T7   46.75   29.87   11.76   0.00   100	B.Tech.	70	35.71	34.29	20.00	0.00	90
Mechanical Engineering   B.Tech.   68   42.65   45.59   11.76   0.00   100	Chemical Engineering						
B.Tech.   68	B.Tech.	74	54.05	32.43	12.16	0.00	98.64
B.Tech.   68	Mechanical Engineering						
B.Tech.		68	42.65	45.59	11.76	0.00	100
B.Tech.	Electrical Engineering						
Engineering   B.Tech.   146   54.79   32.19   13.01   0.00   99.99		77	46.75	29.87	15.58	0.00	92.2
B.Tech.   Electronics   and Communication Engineering   B.Tech.   132   45.45   48.48   6.06   0.00   99.99	Instrumentation and Control						
B.Tech   Electronics   and Communication Engineering   B.Tech   132   45.45   48.48   6.06   0.00   99.99   Section   142   142   143   143   144   144   144   144   144   145   144   145	Engineering						
Communication Engineering   132		146	54.79	32.19	13.01	0.00	99.99
B.Tech. Computer Engineering   B.Tech.   G9   36.23   49.28   8.70   0.00   99.99	Electronics and						
B.Tech. Computer Engineering   B.Tech.   G9   36.23   49.28   8.70   0.00   99.99	Communication Engineering						
Computer Engineering   Section   S		132	45.45	48.48	6.06	0.00	99.99
B.Tech.							
Information Technology   B. Pharm.   67   68.66   26.87   2.99   0.00   98.52     B. A. LL.B. (Hons.)   149   37.58   45.46   10.07   0.00   93.11     MCA		69	36.23	49.28	8.70	0.00	94.21
B. Pharm.       67       68.66       26.87       2.99       0.00       98.52         B.A. LL.B. (Hons.)       149       37.58       45.46       10.07       0.00       93.11         MCA       56       64.29       33.93       0       0.00       98.22         M.Tech       29       44.83       44.83       10.34       0.00       100         Computer Aided Structural Analysis and Design       14       78.57       14.29       7.14       0.00       100         M.Tech.       14       57.14       42.86       0.00       0.00       100         Environmental Process Design       29       62.07       37.93       0.00       0.00       100         M.Tech.       29       62.07       37.93       0.00       0.00       100         Computer Integrated Manufacturing       47.62       42.86       9.52       0.00       100         M.Tech.       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100	Information Technology						
B.A. LL.B. (Hons.)         149         37.58         45.46         10.07         0.00         93.11           MCA         56         64.29         33.93         0         0.00         98.22           M.Tech         29         44.83         44.83         10.34         0.00         100           Computer Aided Structural Analysis and Design         14         78.57         14.29         7.14         0.00         100           M.Tech.         14         57.14         42.86         0.00         0.00         100           Environmental Process Design         29         62.07         37.93         0.00         0.00         100           M.Tech.         29         62.07         37.93         0.00         0.00         100           Computer Integrated Manufacturing         47.62         42.86         9.52         0.00         100           M.Tech.         18         66.67         33.33         0.00         0.00         100           Design Engineering         29         68.97         31.03         0.00         0.00         100		67	68.66	26.87	2.99	0.00	98.52
MCA         56         64.29         33.93         0         0.00         98.22           M.Tech         29         44.83         44.83         10.34         0.00         100           Computer Aided Structural Analysis and Design         14         78.57         14.29         7.14         0.00         100           M.Tech.         14         57.14         42.86         0.00         0.00         100           Environmental Process Design         29         62.07         37.93         0.00         0.00         100           M.Tech. CAD / CAM         29         62.07         37.93         0.00         0.00         100           M.Tech. Computer Integrated Manufacturing         18         66.67         33.33         0.00         0.00         100           M.Tech. Design Engineering         29         68.97         31.03         0.00         0.00         100	B.A. LL.B. (Hons.)	149					
M.Tech       29       44.83       44.83       10.34       0.00       100         Computer Aided Structural Analysis and Design       14       78.57       14.29       7.14       0.00       100         M.Tech.       14       57.14       42.86       0.00       0.00       100         Environmental Design       14       57.14       42.86       0.00       0.00       100         M.Tech.       29       62.07       37.93       0.00       0.00       100         M.Tech.       21       47.62       42.86       9.52       0.00       100         M.Tech.       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100	` '						
Computer Aided Structural Analysis and Design         14         78.57         14.29         7.14         0.00         100           M.Tech. Chemical Process and Plant Design         14         57.14         42.86         0.00         0.00         100           Environmental Process Design         29         62.07         37.93         0.00         0.00         100           M.Tech. CAD / CAM         21         47.62         42.86         9.52         0.00         100           M.Tech. Computer Integrated Manufacturing         18         66.67         33.33         0.00         0.00         100           M.Tech. Design Engineering         29         68.97         31.03         0.00         0.00         100							
Analysis and Design       M.Tech.       14       78.57       14.29       7.14       0.00       100         Chemical Process and Plant Design       14       57.14       42.86       0.00       0.00       100         M.Tech.       29       62.07       37.93       0.00       0.00       100         CAD / CAM       21       47.62       42.86       9.52       0.00       100         M.Tech.       21       47.62       42.86       9.52       0.00       100         M.Tech.       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100					10.0	0.00	100
M.Tech.       14       78.57       14.29       7.14       0.00       100         Chemical Process and Plant Design       14       57.14       42.86       0.00       0.00       100         Environmental Process Design       29       62.07       37.93       0.00       0.00       100         M.Tech. CAD / CAM       21       47.62       42.86       9.52       0.00       100         M.Tech. Computer Integrated Manufacturing       18       66.67       33.33       0.00       0.00       100         M.Tech. Design Engineering       29       68.97       31.03       0.00       0.00       100	<u> </u>						
Chemical Process and Plant Design         14         57.14         42.86         0.00         0.00         100           Environmental Process Design         29         62.07         37.93         0.00         0.00         100           M.Tech. CAD / CAM         21         47.62         42.86         9.52         0.00         100           M.Tech. Computer Integrated Manufacturing         18         66.67         33.33         0.00         0.00         100           Design Engineering         29         68.97         31.03         0.00         0.00         100		14	78.57	14.29	7.14	0.00	100
Design       14       57.14       42.86       0.00       0.00       100         Environmental Process Design       29       62.07       37.93       0.00       0.00       100         M.Tech. CAD / CAM       21       47.62       42.86       9.52       0.00       100         Computer Integrated Manufacturing       M.Tech.       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100			, 5.5	>	, , , , ,		
M.Tech.       14       57.14       42.86       0.00       0.00       100         Environmental Process Design       29       62.07       37.93       0.00       0.00       100         M.Tech. CAD / CAM       21       47.62       42.86       9.52       0.00       100         Computer Integrated Manufacturing       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100							
Environmental Design         Process Design         29         62.07         37.93         0.00         0.00         100           CAD / CAM         29         62.07         37.93         0.00         0.00         100           M.Tech.         21         47.62         42.86         9.52         0.00         100           Computer Integrated Manufacturing         18         66.67         33.33         0.00         0.00         100           Design Engineering         29         68.97         31.03         0.00         0.00         100	<u> </u>	14	57.14	42.86	0.00	0.00	100
Design         29         62.07         37.93         0.00         0.00         100           CAD / CAM         21         47.62         42.86         9.52         0.00         100           M.Tech.         21         47.62         42.86         9.52         0.00         100           M.Tech.         18         66.67         33.33         0.00         0.00         100           Design Engineering         29         68.97         31.03         0.00         0.00         100			07121	.2.00	0.00	0.00	100
M.Tech.       29       62.07       37.93       0.00       0.00       100         CAD / CAM       21       47.62       42.86       9.52       0.00       100         Computer Integrated Manufacturing       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100							
CAD / CAM       21       47.62       42.86       9.52       0.00       100         M.Tech.       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100		29	62.07	37.93	0.00	0.00	100
M.Tech.       21       47.62       42.86       9.52       0.00       100         Computer Integrated Manufacturing       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100			02.07	57.75	0.00	0.00	100
Computer Manufacturing         Integrated Manufacturing         Image: Computer Manufacturing Manufacturing         Image: Computer Manufacturing Ma		21	47.62	42.86	9.52	0.00	100
Manufacturing       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100		~ 1	.,.02	.2.00	7.32	0.00	100
M.Tech.       18       66.67       33.33       0.00       0.00       100         Design Engineering       29       68.97       31.03       0.00       0.00       100	1 2						
Design Engineering         29         68.97         31.03         0.00         0.00         100		18	66.67	33.33	0.00	0.00	100
M.Tech. 29 68.97 31.03 0.00 0.00 100		10	00.07	22.33	0.00	0.00	100
		29	68.97	31.03	0.00	0.00	100
Thermal Engineering	Thermal Engineering		00.77	21.03	0.00	0.00	100
M.Tech. 30 36.67 50.00 10.00 0.00 96.67		30	36.67	50.00	10.00	0.00	96 67

Electrical Power Systems						
M.Tech.	28	32.14	60.71	7.14	0.00	99.99
Power Electronics	-					
M.Tech.	27	66.67	33.33	0.00	0.00	100
Control and Automation						
M.Tech.	25	76.00	20.00	0.00	0.00	92
Communication Engineering						
M.Tech.	29	96.55	3.45	0.00	0.00	100
Embedded System						
M.Tech.	30	96.67	3.33	0.00	0.00	100
VLSI Design						
M.Tech.	29	68.97	31.03	0.00	0.00	100
Computer Science						
M.Tech.	30	56.67	36.67	3.33	0.00	96.67
Information and Network						
Security						
M.Tech.	25	56.00	44.00	0.00	0.00	100
Networking Technologies						
M. B. A. (Full Time)	172					100.00
MBA(FB&E)	100					99.00
M.B.A. (Part Time)	23			-		100.00
M.Pharm.	7	42.86	57.14	0.00	0.00	100
Clinical Pharmacy						
M.Pharm.	2	50.00	0.00	0.00	0.00	50
Drug Discovery						
M.Pharm.	1	100.00	0.00	0.00	0.00	100
Medicinal Chemistry						
M. Pharm.	10	80.00	20.00	0.00	0.00	100
Pharmaceutical Analysis						
M. Pharm.	9	55.56	44.44	0.00	0.00	100
Pharmacology						
M. Pharm.	15	86.67	13.33	0.00	0.00	100
Pharmaceutical Technology						
and Bio-Pharmaceutics						
M.Sc.	22	50.00	45.45	0.00	0.00	95.45
Biochemistry						
M.Sc.	24	91.67	8.33	0.00	0.00	100
Biotechnology						
M.Sc.	18	61.11	38.89	0.00	0.00	100
Microbiology						
LL.M. (Business Law)	4	25.00	75.00	0.00	0.00	100

# **ANNEXURE 6-A**

# Details of Completed Major Research Projects Funded by External Agencies (From July 01, 2014 to March 31, 2015)

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned	
				Funding	
				(₹ in Lacs)	
1.	Biotechnological Applications for Transforming the most	Dr NasreenMunshi	Department of Biotechnology	55.00	
	Abundant Bacteria from Industrial Waste Waters of South	(in collaboration with Dr Sanjay	(DBT), Government of India		
	Gujarat for Bioremediation	Jha, Navsari Agriculture			
		University, Navsari)			
	TOTAL				

# Details of Ongoing Major Research Projects Funded by External Agencies (From July 01, 2014 to March 31, 2015)

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned Funding (₹ in Lacs)
1.	Design and Development of Spatio-Temporal Data Mining Technique and Software Framework for Earth Observation Data	Dr Sanjay Garg	SAC-ISRO, Ahmedabad	10.80
2.	Radiation Harden by Design (RHBD) Standard Cell Library Development	Dr N. M. Devashrayee, Dr U. S. Mehta	SAC-ISRO, Ahmedabad	21.36
3.	Understanding the immersed friction stir welding of aluminum alloys (SERB-DST)	Prof. N. D.Ghetiya, Dr K.M. Patel	DST, New Delhi	13.00
4.	Optimization of Corrugated Horn Antenna using Adaptive Neuro-Fuzzy Inference System	Dr D. A. Pujara, Dr D. M. Adhyaru	SAC-ISRO, Ahmedabad	11.04
5.	Satellite derived rainfall and River discharge and it's seasonal to inter-annual variations from altimeter-radiometer data (November 2011)	Dr Santosh S. Kolte	SAC-ISRO, Ahmedabad	18.00
6.	Calibration and Validation of RISAT-1 SAR Sensor and RISAT-1 derived soil moisture (May 2012)	Dr Parul R. Patel	SAC-ISRO, Ahmedabad	17.00
7.	Reduction of E-Factor in Dyes and Pigment Industries (Environmental Pollution Control)	Dr Parin Shah	Green Environment Services Co-op. Soc. Ltd CETP, Vatva.	7.50

8.	Isolation of bioactive compound from fruit juice of Emblicaofficinalis and investigation into the molecular mechanism of action.	Dr. Snehal S Patel	DST, New Delhi	23.00
9.	Liquid Phase combinatorial synthesis of benzimidazolelibrary for antitubercular activity	Dr. Manjunath Ghate	DST, New Delhi	34.00
10.	To augment teaching and research facilities in the institute	Dr. Manjunath Ghate	DST, New Delhi	55.00
11.	Glutathione appended polymeric nanoconstructs of Asiatic Acid for efficacious neuroprotection against Alzheimer's disease	Dr. Sanjeev Acharya, Dr. Niyati Acharya	Department of Biotechnology	45.568
12.	Identification of compounds from ginger, cinnamon and gooseberry extracts having the potential to prevent protein aggregation and characterization of their mechanism of action	Dr. Mili Das	Department of Biotechnology (DBT), Government of India	44.00
13.	Understanding the nature of liver-stage specific CD8+T cells generated following infectious sporozoite challenge that ensure long-lived protection against plasmodia infection	Dr. Sarat K. Dalai	Department of Biotechnology (DBT), Government of India	43.00
14.	Exploring the colonization of non-rhizobia and understanding the fate of rhizobacteria during rhizobial infection in mung bean	Dr. Shalini Rajkumar	Department of Biotechnology (DBT), Government of India	27.00
15.	Identification of CD8+T cell – specific to liver-stage antigens of Plasmodium berghei to understand anti-malarial protective immunity	Dr. Sarat K. Dalai	Gujarat State Biotechnology Mission (GSBTM), Department of Science & Technology (DST), Government of Gujarat	19.75
16.	Ideopathic mental retardation and dysmorphism: Karyotypic and UPD Analysis	Dr. Sonal Bakshi	Gujarat State Biotechnology Mission (GSBTM), Department of Science & Technology (DST), Government of Gujarat	15.27
17.	Generation of thermostable variants of a mesophilic amylase by directed evolution and their characterization	Dr. Mili Das	Gujarat State Biotechnology Mission (GSBTM), Department of Science & Technology (DST), Government of Gujarat	15.95
18.	Biochemical basis of repression of MPS phenotype in rhizobia	,	Gujarat State Biotechnology Mission (GSBTM), Department of Science & Technology (DST), Government of Gujarat	14.33
19.	Molecular basis of succinate mediated (catabolite) repression of mineral phosphate solubilization in nitrogen fixing Klebsiella pneumonia	Dr. Shalini Rajkumar,	DST, New Delhi	28.89

20.	Social Auditing under the Juvenile Justice (Care and	Dr. Krishna Pal Malik	Social Justice and	10.00
	Protection of children) Act, 2000		Empowerment Department,	
			Government of Gujarat	
•			TOTAL	474.46

# Details of Major Research Projects Funded by External Agencies and Sanctioned during July 01, 2014 to March 31, 2015

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned Funding (₹ in Lacs)	
1.	Study the behavior of precast beam-column junction under progressive collapse scenario – An experimental and analytical investigations	Prof. Digesh D. Joshi	DST, New Delhi	20.50	
2.	Development of Passive Damping surface coating for Advance Material Based Structural System Using PZT (Piezo) Power.	Dr. S. P. Purohit, Dr. Paresh V. Patel	SAC-ISRO, Ahmedabad	8.09	
3.	Process development for minimization of springback deformation and enhancement of profile accuracy of CFRP reflectors	Prof. S J Joshi, Dr. B A Modi, Dr. K M Patel	SAC-ISRO, Ahmedabad	14.52	
4.	District Human development Report-Rajkot	Prof. Raghuvir Mody, Prof. Yogesh M. Doshit	Gujarat Social Infrastructure Development Society, GoG	6.00	
5.	District Human development Report-Junagadh	Prof. Raghuvir Mody Prof. Yogesh M. Doshit	Gujarat Social Infrastructure Development Society, GoG	6.00	
6.	Investigation into histone de-acetylases (HDACs) and their downstream targets in cardiac-cachexia	Dr. Bhoomika Patel	Indian Council of Medical Research	Amount yet to be decided	
7.	Exploring the effect of histone deacetylase (HDAC) in cancer-cachexia and their downstream targets	Dr. Bhoomika Patel	Science & Engineering Research Board	Amount yet to be decided	
8.	Epidemiology of anemia in pre-school tribal children of eastern Gujarat with reference to etiology, pathophysiology and nutritional impact	Dr. Shital Panchal	Indian Council of Medical Research	Amount yet to be decided	
	TOTAL				

# Details of Major Research Projects Submitted to External Funding Agencies during July 01, 2014 to March 31, 2015

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Funding Requested (₹ in Lacs)
1.	Semantic Enabled Cloud for Satellite Meteorological Data Processing.	Dr MadhuriBhavsar	SAC-ISRO, Ahmedabad	19.808
2.	Design & Implementation of Performance-centric cloud- based e-Prayogshala as a Service	Dr Narayan Joshi	DST, New Delhi	20.9536
3.	Development of Forensic Image Processing Tool for Human Identification and Information Retrieval, Invariant of Changing Facial Features and Dynamic Human Profiling	Dr Sharada Valivetti	DEITY	35.321
4.	Smart Fire Mitigation Systems for High Rise Buildings	Dr K. Kotecha	DEITY	15.899
5.	Application of Precast Products made using Bottom Ash and Fly Ash for Rural Pavements and other Infrastructure in India	Dr U. V. Dave	IC-IMPACTS (The India- Canada Centre for Innovative Multidisciplinary Partnerships to Accelerate Community Transformation	44.00 (84,500 Canadian Dollar)
6.	Development of Reinforced Aerated blocks with Innovative Composite Ingredients as Flexural/Compression Members For Space Structures with Stringent Specifications	Dr U. V. Dave	SAC-ISRO, Ahmedabad	6.00
7.	Development of Tool for Crop Suitability Analysis in Patan Region of Gujarat using Geomatics	Dr P. R. Patel	Gujarat Council of Science and Technology	11.18
8.	Isolation & Characterization of Bioprospective Molecule of Euphoria longana and -exploring mechanism of Neuroprotective Action against Alzheimer Disease	Dr Jigna Shah	Indian Council of Medical Research	26.487
9.	Bedaquine Dry Powder Inhaler: A Boon for the Treatment of Multi Drug Resistant Tuberculosis	Dr ShitalButani	DST, New Delhi	26.076
10.	Pharmacological Target Investigation and Management for Lung Cancer	Dr Bhoomika Patel	Council of Science & Industrial Research	25.164
11.	Generation of New Leads as Antimalarial Agents : Inhibitors of Novel malaria parasites enzyme <i>Pf</i> DHODH	Dr Vivek Vyas	DST, New Delhi	30.79
12.	Design, Development & Evaluation of Cocrystals of Antiplatelet Agents for Desirable Performance Characteristics	Dr Jignasa Savjani	Council of Science & Industrial Research	20.28
13.	Degradation Study of Active Pharmaceutical Ingredient	Dr Charmy Kothari	DST, New Delhi	31.60

	(PDE 5 inhibitor) and its Marketed Formulation by Applying QbD Approach and Screening of PDE 5 Inhibitor as Adulterant in Marketed Formulation used in Erectile Dysfunction in India			
14.	Investigation of the Molecular Basis of Enhanced Alcohol Production by <i>Saccharomyces cerevisiae</i> under Influence of Audible Sound		DST, New Delhi	20.00
15.	Development of Microbial Fuel Cell for Industrial Waste Water Treatment and Energy Generation	Dr Nasreen Munshi, Prof. Manisha Shah	MNRE, Govt. Of India	62.24
16.	Idiopathic Mental Retardation: A Molecular Genetic Approach to Identification of Sub-Microscopic and Sub- Telomeric Rearrangements	Dr Sonal R. Bakshi	Indian Council of Medical Research	35.00
			TOTAL	430.80

# **ANNEXURE 6-B**

# <u>Details of Ongoing Minor Research Projects Funded by External Agencies (From July 01, 2014 to March 31, 2015)</u>

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned Funding (₹ in Lacs)
1.	Experimental Investigations on Pump as Turbine (PAT) for Micro Hydropower Plants	Dr. R. N. Patel, Prof. S.V.Jain	Gujarat Council on Science and Technology (GUJCOST)	4.80
2.	Parallelization of Molecular Dynamics and Turbulence Codes related to Nuclear Fusion using CUDA	Dr. Priyanka Sharma	Institute of Plasma Research, Gandhinagar	7.20
3.	Experimental Investigation of Life Cycle Analysis and Combustion Characteristic of CI Engine operating on Esterified Oil and its blends with Bio Additives	Dr. R. N. Patel, Prof. A. M. Lakdawala, Prof. N. K. Shah	Gujarat Council on Science and Technology (GUJCOST)	8.10
4.	Precision Agriculture Support System using Wireless Sensor and Actuator Network	Dr. D. K. Kothari, Prof. S. H. Gajjar, Prof. M. A. Upadhyay	Gujarat Council on Science and Technology (GUJCOST)	4.50
5.	Low Temperature Synthesis and Characterization of Magnetic Nanoparticles	Dr. Chetna Chauhan	Gujarat Council on Science and Technology (GUJCOST)	4.95
6.	Design of a Hybrid System for Seamless Communication Across DVB-RCS and LTE Networks	Dr. Y. N. Trivedi, Dr. N. P. Gajjar	Gujarat Council on Science and Technology (GUJCOST)	3.00
7.	Spectrum Sensing Techniques in Cognitive Radio	Prof. Rina Parikh, Dr. Y. N. Trivedi	Gujarat Council on Science and Technology (GUJCOST)	3.00
8.	Characterization of Shock Table	Dr. S. P. Purohit Dr. P. V. Patel	Gujarat Council on Science and Technology (GUJCOST)	7.40
9.	Process Development for Hydrogen Production through Solar Thermal Energy	Dr. R.K. Mewada, Dr. S.S. Patel	Gujarat Council on Science and Technology (GUJCOST)	4.00
10.	Determination and Predictions of Properties of	Dr. M. H. Joshipura,	Gujarat Council on Science and	3.30

	Biodiesel and its Blends	Dr. A.P. Vyas	Technology (GUJCOST)	
11.	Design and development of automated and reliable service provisioning cloud architecture for engineering educational domain	Dr. Madhuri Bhavsar	Gujarat Council on Science and Technology (GUJCOST)	3.00
12.	DNA Sequencing and Assembly using GPU	Dr. Vibha Patel	Gujarat Council on Science and Technology (GUJCOST)	4.00
13.	Object Detection and Surveillance System	Dr. Sanjay Garg	Gujarat Council on Science and Technology (GUJCOST)	4.00
14.	Use of Marine Sand in Concrete Construction	Dr. Urmil V. Dave	Adani Infrastructure Limited	2.50
15.	In-silico Designing, Synthesis and Pharmacological Screening of Dipeptidyl Peptidase-4 (DPP-4) Inhibitors as Novel Antidiabetic Agents	Prof. Manjunath Ghate	Gujarat Council on Science and Technology (GUJCOST)	5.00
16.	Development of Self-Emulsifying Drug Delivery Systems for poorly soluble Antihypertensive Drug	Dr. ShitalButani	Gujarat Council on Science and Technology (GUJCOST)	3.60
17.	Isolation and Characterization of Marker from Polyherbal Formulation	Dr. Charmy Kothari	Gujarat Council on Science and Technology (GUJCOST)	5.00
18.	Investigation into the Prevalence of Pre-Diabetic Status in school going children in Gujarati Population and Evaluation of its Association with Various Risk Factors	Dr. Snehal Patel	Gujarat Council on Science and Technology (GUJCOST)	3.50
19.	Computer aided Drug Design and Pharmacological Evaluation of Cyclooxygenase-2 (COX-2) Inhibitors:  An Efficient Conversion of Non-steroidal Anti-inflammatory Drugs to Potent and highly Selective COX-2 Inhibitors	Dr. JignasaSavjani	Gujarat Council on Science and Technology (GUJCOST)	3.50
20.	Development and Optimization of Formulations Containing Glycin max (Soyabean), Moringaoleifera and Phoenix dactylifera for the Treatment of Malnutrition	Dr. Vimal Kumar,	Gujarat Council on Science and Technology (GUJCOST)	5.00

21.	Investigating the role of histone deacetylase(HDAC) Inhibitors in Diabetes and Colon Cancer, and development of Site Specific Drug Delivery Systems	Dr. Mayur M. Patel	Gujarat Council on Science and Technology (GUJCOST)	4.00
22.	Investigation into the prevalence of pre-diabetic status in Gujarati population and evaluation of its association with various risk factors.	Dr. Snehal Patel	Research Society for the Study of Diabetes in India	1.95
23.	Comparative study of the nature of innate immunity generated in response to attenuated (yspz) vs. infectious soporozite in plasmodia infection	Dr. Sarat K. Dalai	Gujarat Council on Science and Technology (GUJCOST)	4.85
24.	Evaluation of Boric Acid induced Male Reproductive Toxicity and Ascertaining Reversals Poptential of hydro-alcoholic extracts of Eclipta Alba	Dr. Sriram Seshadri	Gujarat Council on Science and Technology (GUJCOST)	2.00
25.	Downs Syndrome in Gujarat: Molecular Probing in Origin	Dr. Sonal R. Bakshi	Gujarat Council on Science and Technology (GUJCOST)	6.00
			TOTAL	108.15

# Details of Minor Research Projects Funded by External Agencies and Sanctioned during July 01, 2014 to March 31, 2015

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned Funding
				(₹ in Lacs)
1.	Report of 3 <sup>rd</sup> State Finance Commission	Prof. Raghuvir Mody,	Gujarat State 3rd Finance	1.50
		Prof. Yogesh M. Doshit	Commission	
			TOTAL	1.50

# Details of Minor Research Projects Submitted to External Funding Agencies during July 01, 2014 to March 31, 2015

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Funding Requested (₹ in Lacs)
1.	Design of Sensor based Intelligent Buildings	Dr. K Kotecha	UGC	3.20
2.	Design of Low Noise, Low Power, Automatic Gain Controlled Amplifier for Biomedical Applications	Prof. D. J. Panchal, Prof. A. I. Mecwan, Prof. V. G. Savani	Gujarat Council on Science and Technology (GUJCOST)	7.45
3.	Establishment of Free Space Optical communication link for Real Time Audio Transmission	Prof. D. G. Shah, Dr. D. K. Kothari	Gujarat Council on Science and Technology (GUJCOST)	8.30
4.	Development of Microscopic Technique for Automatic Characterization of the Cell Organization for Authentication of few Indian Herbal Plants	Dr. T. H. Zaveri, Prof. B. D. Fataniya	Gujarat Council on Science and Technology (GUJCOST)	7.85
5.	SLA Based an Efficient and Reliable Resource Provisioning in Public Cloud.	Dr. Madhuri Bhavsar	UGC	3.00
6.	Design and Synthesis of Quinolone Derivative as Novel Apoptosis Inducers and Anticancer Agents	Dr. Vivek Vyas	Gujarat Council on Science and Technology (GUJCOST)	9.97
7.	Screening & characterization of Anti-cancer Bioactive Principle from the Indigenous Plants of Dang Forest, Gujarat	Dr. Priti Mehta	Gujarat Council on Science and Technology (GUJCOST)	5.60
8.	Ocular Iontophoretic Delivery of Nanoparticles via Transscleral Route for Posterior Diseases	Dr. Jigna Shah	Gujarat Council on Science and Technology (GUJCOST)	10.00
9.	Investigation into Neuroprotective Effects of Bergenia Ciliate Roots in Alzheier's Disease with special reference to Bergenin	Dr. Niyati Acharya	Gujarat Council on Science and Technology (GUJCOST)	9.762
10.	Development of Optimization of Mucodhesive Film for treatment of Vaginal Candidiasis	Dr. Renuka Mishra	Gujarat Council on Science and Technology (GUJCOST)	6.51
11.	Effect of Polyphenols containing Plant Extracts in the treatment and prevention of Age Related Neuro-	Dr. Shital Panchal	Gujarat Council on Science and Technology	10.88

	Degenerative Disorders		(GUJCOST)	
12.	Investigation of Mechanism of Actions of selected	Dr. Jigna Shah	Gujarat Council on Science and	9.90
	Herbal Drugs for the treatment of ADHD		Technology	
			(GUJCOST)	
13.	Investigation of the Molecular Basis of Enhanced	Dr. Vijay Kothari	Gujarat Council on Science and	4.45
	Exopolysaccharide (EPS) Production by Xanthomonas		Technology (GUJCOST)	
	Campestris under influence of Audible Sound			
14.	Estrogen Receptor Beta mediates Tamoxifen response	Dr. Heena Dave	Gujarat Council on Science and	8.90
	in Breast Cancers		Technology (GUJCOST)	
			TOTAL	105.77

# **ANNEXURE 6-C**

# Details of Completed Minor Research Projects Funded by Nirma University Funded (From July 01, 2014 to March 31, 2015)

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned
				Funding
				(₹ in Lacs)
1.	Agriculture Support system using Wireless Support System	Prof. S. H. Gajjar	Nirma University	1.00
		Prof. J. B. Patel		
2.	Breath Odor Detection based on Electronic Olfaction for Medical	Prof. H. K. Patel	Nirma University	1.00
	Diagnosis			
3.	RF Based Home Appliances Controlling System	Prof. V. G. Savani,	Nirma University	0.35
		Prof. Jalpa Shah		
4.	Design and Development of Crack Monitoring System for Concrete	Prof. Digesh D. Joshi	Nirma University	0.9666
	Elements	Prof. Harsh H. Kapadia		
		Prof. Alpesh I. Patel		
5.	Degradation of Dye Effluent using Ozone	Prof. Sandip Sharma	Nirma University	1.00
6.	Colour removal from Dyes Waste Water using Pervoskites based on	Prof. Femina Patel	Nirma University	1.00
	Absorbent			
7.	Synthesis of Starch Based Polymer/ Copolymers for Drug Delivery	Prof. Nimish Shah	Nirma University	1.00
	Application			
			TOTAL	6.32

## Details of Ongoing Minor Research Projects Funded by Nirma University (From July 01, 2014 to March 31, 2015)

Sr. No.	Title of the Research Project	Name of Principal Investigator	Funding Agency	Total Sanctioned
				Funding (₹ in Lacs)
1.	Minor Research Project on "Development and Implementation of	Prof. Jayesh Barve,	Nirma University	1.00
	Control Algorithms for Autonomous Quad-copter Unmanned	Prof. J B Patel,		

	Aerial Vehicle (UAV)"	Prof. D V Patel		
2.	Unmanned Arial Vehicle	Prof. Jayesh Barve,	Nirma University	1.00
		Prof. J. B. Patel		
3.	Design & Development of Low Cost ICT based Portable	Prof. Amit Degada	Nirma University	0.63
	Telemedicine System	Prof. V. G. Savani		
4.	Trend Analysis and Inclusion of HOTS in Engineering Education	Dr. Richa Mishra	Nirma University	1.00
5.	Studies on Exploring Novel Excipients for drug delivery in oral	Prof. Nimish Shah,	Nirma University	1.80
	cavity	Dr. Dhaivat Parikh		
6.	Determination and Prediction of Properties of Biodiesel and blends of Biodiesel	Prof. Parag Saxena	Nirma University	1.00
7.	Multimedia Communication using Free Space Optical	Prof. A. I. Mecwan	Nirma University	0.70
	Communication	Prof. D. G. Shah		
8.	Wireless Interface for Humidity and Temperature Monitoring	Prof. Jalpa Shah	Nirma University	1.00
9.	Minor Research Project on Experimental Investigations on	Dr. B.A. Modi,	Nirma University	1.00
	Ultrasonic Single Point Incremental Forming	Prof. A.M. Gohil		
10.	Fabrication Characterization and Application of Electrodes for	Prof. Priya Saxena	Nirma University	1.00
	Electrochemical Wastewater Treatment	,		
11.	Marketing Success - A Study of Indian Corporates	Prof. Jayesh Aagja,	Nirma University	1.00
		Prof. A. C. Brahmbhatt		
12.	Excellence among Indian Companies in Service Sector	Prof. Ashwini Awasthi	Nirma University	1.00
13.	Standardization of Polyherbal Formulation	Dr. Charmy Kothari	Nirma University	0.90
14.	Design Synthesis and Pharmacological Evaluation of Substituted	Prof. Vivek Vyas	Nirma University	0.60
	Quinoline Derivatives as Anticancer Agent			
15.	Formulation, Development and Evaluation of Controlled Drug	Dr. Jigar Shah	Nirma University	0.80
	Delivery of Analgesics via Novel Routes			
16.	Design, Synthesis and Phamacological Evaluation of Novel	Prof. Bhumika Patel	Nirma University	0.60
	Heterocyclic Derivatives as Anti-Diabetic Agents			
17.	Development of Lipidic Drug Delivery System for Bioavailability	Dr. Shital Butani	Nirma University	0.90
	Improvement of the poorly Water Soluble Antihypertensive Drug			
18.	Studies on Exploring Novel Excipients for Drug Delivery in Oral	Dr. Dhaivat C. Parikh	Nirma University	1.80
	Cavity			
19.	Formulation, Design and Development of Sublingual Film of an	Dr.Renuka Mishra	Nirma University	0.90
	Anti-Hypertensive Drug			

20.	Standardization and Evaluation of a Polyherbal Formulation for	Ms. NagjaTripathi	Nirma University	0.80
	Metabolic Disorder	2	•	
21.	Development of Oryzanol Formulation and its Pharmacological	Dr. Shital Panchal	Nirma University	1.00
	Evaluation for Neurodegenerative Disorders			
22.	Issues in Implementation of the Maintenance and Welfare of	Dr. Krishna Pal Malik	Nirma University	1.00
	Parents and Senior Citizens Act 2007 in Ahmedabad- A			
	Sociological Exploration			
23.	Problem based learning in Legal Education	Dr. Shalini S.	Nirma University	0.80
24.	Participatory Gender Audit of Nirma University	Prof. Yogesh Madan	Nirma University	1.00
		Dharangutti		
25.	Evaluation of Law relating Maternal Health: A Comparative Study	Prof. Shalini Bahuguna	Nirma University	1.00
	of Rural and Urban Areas of Ahmedabad			
26.	Comparative Study on Emerging Laws on Admiralty Claims and	Dr. Ram Niwas Sharma	Nirma University	1.00
	Jurisdiction in Gujarat and Maharashtra			
			TOTAL	25.23

### Best Practice - I

#### **Title of the Practice:**

Continuous Evaluation of Academic Progress of the students

#### **Objectives of the Practice:**

The para two of the Mission statement of the University states – "It endeavours to treat every student as an individual, to recognize their potential and to ensure that they receive the best preparation and training for achieving their career ambitions and life goals".

To fulfil the Mission, the University follows "Continuous Evaluation (CE)" as one of its best practices. The objectives of the CE are to:

- Move from Summative to Formative Assessment
- Emphasize on Higher Order Thinking Skills and not on Lower Order Thinking Skills
- Boost Creativity among the students
- Empower the faculty to choose the best assessment tools for the course
- Be in sync with benchmarked International Practices

#### **The Context:**

Evaluation in a generic sense is observing and grading every student during the teaching - learning process on all the defined aspects and the term "continuous" indicates that evaluation is not 'just' a one-time activity, but a continuous process. The student is expected to learn from the classroom activities, the environment and peers besides keeping pace with the course delivery. Continuous Evaluation is done to facilitate multifaceted the all-round development and to quantify the overall growth of the students.

### The Challenges in Adopting the CE are:

- To design tools for assessment suitable for the student to understand and faculty to practice/deliver
- To implement a paradigm shift learner in the centre
- To inculcate Higher Order Thinking Skills
- To have experienced and qualified faculty

#### The Practice:

The continuous evaluation practice monitors the student's academic as well as holistic progress. The process for the practice is as follows:

- The aspects of monitoring are declared by the course faculty in the beginning of the course.
- The student is monitored on several aspects, e.g., knowledge enrichment, involvement in classroom and team activities, articulation, presentation and dexterity skills, pace with trends, discipline specific ethics, values, etc.
- Depending within the course purview, the faculty declares the results from time to time on different aspects (per se) and the students are systematically informed.
- The students are expected to meet the concerned course faculty, receive suggestions, and engage themselves in fruitful discussions with the faculty and peers to identify the lacuna and possible corrective actions.

- The student is also mentored based on the academic performance, and learning of discipline specific skills.
- The student is motivated, and oriented to become a life-long learner.
- The faculty members also introspect the course content, course delivery methods, teaching-learning strategies, pattern of evaluation and map each component to recognize the flaws, if any. The process allows the faculty to evolve better mechanisms / creative ways of pedagogy and offer diagnosis.
- Since academic year 2012-13, CE is introduced in all the programmes under Nirma University. The 60% of grading is under the CE component and 40% is evaluated under Semester End Examination (SEE). The results of CE component (and its subcomponents) are declared in stipulated time frame, much before the SEE. The students are made aware about the component-wise distribution in the beginning of the semester.
- In a few of the programmes, a course feedback mechanism is developed wherein the faculty describes the course effectiveness; achievement of learning outcomes and feedback for the improvement.

### **Uniqueness in the context of Indian Higher Education:**

- The graduate and post graduate programmes offered by the University are open for pan India students apart from a few supernumerary seats. The students from various boards / background and cultural diversity are brought at par.
- As the CE approach emphasizes on thinking processes and expression, provides easy connect among varied masses, it helps groom students. The CE inclusion brings transparency in evaluation, avoids biasing and reduces the ill-feeling among students.

#### **Constraints / Limitations:**

• The CE approach demands focus on each student, indicating sufficient time to be devoted by the mentor faculty for the students. The constraint is the inadequacy in availability of faculty with desired qualification.

#### **Evidence of Success:**

The CE component is introduced across the University in academic year 2012-13. Since then the faculty members are empowered to adopt different teaching-learning techniques for the course effectiveness. As it is the paradigm shift, some faculty members have chosen a few techniques along with conventional classroom teaching, e.g.,

- Flipping the classroom
- Discussions on a topic using NPTEL / YouTube videos
- Open Book Examination
- Learning from Peers Presentations
- Simulations and Case Studies, Role Plays
- Pre-reading Material Based Discussions
- Participation and Interaction in the Class Activities
- Class tests and Term Assignment, etc.

The engagement and involvement of the students are encouraging and it is evident from the overall results in the last couple of years. The failure in various courses in CE components has reduced, showing the effectiveness of the approach.

### **Problems Encountered and Resources required:**

The CE approach shall be an indicator of students' overall growth over a period. The faculty / mentors needs to invest time in evolving various techniques, besides researching ways of improvement.

This formative and continuous assessment is a manpower intensive approach. Further, it requires significant documentation for maintaining transparency in evaluation.

There are no problems encountered yet, rather it reduces the grievances.

### **Best Practice - II**

#### **Title of the Practice:**

The Bottom-up Approach for arrival of the Budget Estimates for each financial year.

### **Objectives of the Practice:**

- To make the budgeting process more participative and transparent
- To involve different stakeholders in the budgeting process
- To systematise the budgeting process and to adhere to the rules and regulations of the University

#### The Context:

The arrival of the budget for various activities that are to be carried out in a particular year at any Institution is very challenging, as the resources are to be allocated for various levels of activities taking into consideration the need of the stakeholders, classroom and laboratory modernisation, technology development, curricular and co-curricular activities of the students, faculty and staff development, industrial visits, etc. In addition, it is a challenging task to ensure that all the faculty members at all levels understand the impact of arrival at the correct budget and streamlining them towards the expected results. Past experiences have shown that if the inputs are not taken from all those who are involved in day to day activities and future development of the Institution, the goals set by the University are not fulfilled. Therefore, bottom-up approach and deliberations on various levels have resulted in realistic, meaningful and attainable budget proposal.

#### The Practice:

The Regulation Act 1(A) has been brought out by the University regarding submission of all the budget estimates. The budget proposal includes following components:

- 1. Estimated Expenditure for the Current Activities (Recurring)
- 2. Estimated Expenditure for the Current Activities (Non-Recurring)
- 3. Estimated Expenditure for the New Activities (Recurring)
- 4. Estimated Expenditure for the New Activities (Non-Recurring)
- 5. Estimated Receipts
- 6. Expenditure for (a) Consumables, (b) Books & Periodicals, (c) Computer Software, (d) Equipment and (e) Maintenance of Equipment
- 7. Purchase of New Equipment
- 8. Conducting of National Seminar/Conferences, etc.
- 9. Research Activities

The detailed procedure has been evolved which includes deliberations in the departments at all levels be scrutinized by Area/section Level Committee, Department Level Committee, etc. The same is discussed at the University level.

These types of deliberations at various levels ensure the realistic budget proposal aiming at attaining the goals set by the University and Institutes.

#### **Evidence of Success:**

The last few years' results have shown that the utilisation of the budget and the various activities for which allocations of the fund provided have been quite satisfactory. There has been satisfaction amongst the faculty members at all levels that their contribution towards the preparation of budget proposal for various activities they had intended for has resulted in fruitful gains. This has also resulted in unified approach with satisfaction at all the levels.

#### **Problems Encountered and Resources required:**

Some of the faculty members have less experience, are not exposed to some of the latest developments in their own areas and also lack exposure to arrive at the proper cost of various equipment, budget preparation methods, etc. So, they have to be trained and motivated to go through the latest developments in their own areas, carry out market survey for identifying the latest equipment and their costs, etc. The University provides all facilities and resources to overcome all the said deficiencies in the faculty members by providing training and motivation.

# Notes

