

# Annual Quality Assurance Report (AQAR) of the IQAC

Academic Year 2013-2014

GOVERNMENT INSTITUTE OF SCIENCE, NIPAT NIRANJAN NAGAR, CAVES ROAD AURANGABAD-431 004, MAHARASHTRA

# The Annual Quality Assurance Report (AQAR) of the IQAC 2013-14

# Part – A

# I. Details of the Institution

1.1 Name of the Institution	Government Institute of Science, Aurangabad				
1.2 Address Line 1	Nipat Niranjan Nagar				
Address Line 2	Caves Road				
City/Town	Aurangabad				
State	Maharashtra				
Pin Code	431 004				
Institution e-mail address	director@inosca.org				
Contact Nos.	0240-2400586				
Name of the Head of the Institution	n: Dr. RavindraRamakant Deshpande				
Tel. No. with STD Code:	0240-2400598				
Mobile:	98233867880				
Name of the IQAC Co-ordinator:	Dr. AniroodhaVasantPethkar				

Mo	Mobile: 9833494261									
IQAC e-mail address: iqacgis@gmail.com										
1.3	NAAC Tr	rack ID(For e	ex. MHCO	GN 18879)	MHCOGN114	53				
1.4	1.4 NAAC Executive Committee No. & Date:  (For Example EC/32/A&A/143 dated 3-5-2004.  This EC no. is available in the right corner- bottom of your institution's Accreditation Certificate)									
1.5 Website address: www.inosca.org										
	W	eb-link of th	e AQAR:	http://v	vww.inosca.org/	naac-reaccredit	tation-cycle-2.html			
For	ex. http://	www.ladyke	anecolleg	e.edu.in/A	QAR2012-13.0	loc				
1.6	Accredita	tion Details	_							
	Sl. No.	Cycle	Grade	de CGPA Year of Validity Accreditation Period						
	1	1 <sup>st</sup> Cycle	B++		2004	2004-2009				
	2	2 <sup>nd</sup> Cycle								
	3	3 <sup>rd</sup> Cycle								
	4	4th C1-					1			

DD/MM/YYYY

2013-14

1.7 Date of Establishment of IQAC:

1.8 AQAR for the year (for example 2010-11)

15/01/2005

1.9 Details of the previous year's AQAR submitted to NAACafterthe latest Assessment and Accreditation by NAAC ((for example AQAR 2010-11submitted to NAAC on 12-10-2011)							
<ul> <li>ii. AQAR</li> <li>iii. AQAR</li> <li>iv. AQAR</li> <li>v. AQAR</li> <li>v. AQAR</li> </ul>	2005-06 submitted to NAAC on 31/05/2014 2006-07 submitted to NAAC on 31/05/2014 2007-08 submitted to NAAC on 31/05/2014 2008-09 submitted to NAAC on 31/05/2014 2009-10 submitted to NAAC on 31/05/2014 2010-11 submitted to NAAC on 31/05/2014						
1.10 Institutional Status							
University	State Central Deemed Private						
Affiliated College	Yes Vo No						
Constituent College	Yes No						
Autonomous college of U	GC Yes No						
Regulatory Agency appro	ved Institution Yes No						
(eg. AICTE, BCI, MCI	PCI, NCI)						
Type of Institution	Co-education						
	Urban Rura Tribal						
Financial Status	Grant-in-aid UGC 2(f) UGC 12B						
	Grant-in-aid + Self Financing Totally Self-financing						
1.11 Type of Faculty/Prog	gramme						
Arts	Science Commerce Law PEI (PhysEdu)						
TEI (Edu) Engineering Health Science Management							
Others (Specif	y) Post Graduate and Research Institute						
1.12 Name of the Affiliati	ng University (for the Colleges)  Dr. Babasaheb Ambedkar  Marathwada University, Aurangabad						

# 1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc Autonomy by State/Central Govt. / University University with Potential for Excellence **UGC-CPE DST Star Scheme UGC-CE DST-FIST UGC-Special Assistance Programme** UGC-Innovative PG programmes Any other (Specify) **UGC-COP** Programmes 2. IQAC Composition and Activities 05 2.1 No. of Teachers 01 2.2 No. of Administrative/Technical staff 02 2.3 No. of students 2.4 No. of Management representatives 2.5 No. of Alumni 01 2. 6 No. of any other stakeholder and community representatives 2.7 No. of Employers/ Industrialists 01 00 2.8 No. of other External Experts 2.9 Total No. of members 10 2.10 No. of IQAC meetings held 02

2.11 No. of meetings with various stakeholders:  No. 02 Faculty 02									
Non-Teaching Staff /Students 01 Alumni 01 Others	fon-Teaching Staff /Students  01 Alumni  01 Others								
2.12 Has IQAC received any funding from UGC during the year? Yes No  If yes, mention the amount  2.13Seminars and Conferences (only quality related)									
(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC									
Total Nos. Nil International National State Institution Level									
(ii) Themes NA 2.14 Significant Activities and contributions made by IQAC									
<ul> <li>The faculty members are involved in the framing and revision of syllabus as a part of various committees in the University</li> <li>The staff members are encouraged to submit research projects to various funding agencies, pursue research work, and publish papers in peer reviewed and refereed journals participate in and organize conferences.</li> <li>The Placement and training cell established to offer career guidance to the students and to co-ordinate with the Institutes and Industries for arranging in campus or off campus interviews.</li> <li>The faculty members participated in refresher courses and STP: Foundation Training Programme of Associate Professor and Assistant Professors in Higher Education Department (Phase – I, II and III)</li> <li>The guest lectures by eminent persons are arranged to keep the students abreast of the current developments in the subject.</li> </ul>									

Study tours and industrial visits are organized in order to acquaint the students with the application of their theoretical knowledge.

# 2.15 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
<ul> <li>Encouraging the faculty members to contribute to syllabi designing and revisions.</li> <li>Setting up a "Placement and training Cell" in the institute for providing guidance to the students with respect to admissions, career prospects, preparation for competitive exams, placement and training and personal counselling.</li> <li>Motivation to the teaching staff in faculty development programmes.</li> <li>Focus on research activities to be carried out by staff and students.</li> <li>Providing additional library facilities such as reading room for students and staff, separate newspaper reading facility and open access facility.</li> <li>Inviting experts from various fields and alumni for guest lectures, seminars, workshops, conferences.</li> <li>Organizing study tours for the students</li> </ul>	<ul> <li>The faculty members are involved in the framing and revision of syllabus as a part of various committees in the University</li> <li>The Placement and training cell established to offer career guidance to the students and to coordinate with the Institutes and Industries for arranging in campus or off campus interviews.</li> <li>The faculty members participated in refresher courses and STP: Foundation Training Programme of Associate Professor and Assistant Professors in Higher Education Department (Phase – I, II and III)</li> <li>The staff members are encouraged to submit research projects to various funding agencies, pursue research work, and publish papers in peer reviewed and refereed journals participate in and organize conferences.</li> <li>The guest lectures by eminent persons are arranged to keep the students abreast of the current developments in the subject.</li> <li>Study tours and industrial visits are organized in order to acquaint the students with the application of their theoretical knowledge.</li> </ul>

2.15 Whether the AQAR was placed in statutory body	Yes No
Management Syndicate	Any other body
Provide the details of the action taken	

<sup>\*</sup> Attach the Academic Calendar of the year as Annexure.

#### Criterion - I

# **I. 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
PhD	05			
PG	05			
UG				
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				
Others				
Total	10			
Interdisciplinary	01			
Innovative				

- 1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options
  - (ii) Pattern of programmes:

Pattern	Number of programmes
Semester	05
Trimester	
Annual	

1.3 Feedback from stakeholders*Alu (On all aspects)	ımni	Parents	~	Employers		Students	<b>*</b>	
Mode of feedback:	Online	Manual	~	Co-operating	schoo	ols (for PE	(I)	

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

The Institute is affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad and the syllabus framed by the University is followed by all the Departments.

Members of the Teaching Staff hold numerous responsible positions in University appointed committees, take important decisions and thereby contribute to value addition in the teaching-learning process.

The faculty members are associated with the Board of Studies of the University.

Prof. S.G. Kulkarni: Chairman of Board of Studies in Biophysics

Dr. Mrs. S. M. Dharmadhikari-- Member of the Board of Studies in Microbiology

Dr. Mrs. S. M. Dharmadhikari-- Member of the 32/5 in Microbiology

Dr. Mrs. S. M. Dharmadhikari-- Member of the faculty of Science Dr. S.M. Deshpande—Member of Board of studies in Geology

Dr.A.G. Jadhav: Member of Board of studies in Bioinformatics

<sup>\*</sup>Please provide an analysis of the feedback in the Annexure

1.5	5 Anv	v new	Det	oartment/	Centre/	intro	duced	during	the	vear.	If ves.	give	details.
1	, , ,,,,	, 110 **	-	our tillellu	Contro	mu	aucca	auring	uic	y cui.	11 <i>y</i> 00,	5110	actuirs.

NO			

#### Criterion - II

# 2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
20	13	04	02	01

2.2 No. of permanent faculty with Ph.D.

15
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2.3 No. of Faculty PositionsRecruited (R) and Vacant(V) during the year

Asst.		Associa	ite	Profes	sors	Others	3	Total	
Profes	sors	Profess	ors						
R	V	R	V	R	V	R	V	R	V
13	08	04	06	02	02	01		20	16

2.4 No. of Guest and Visiting faculty and Temporary faculty

	11 visiting	37 on CHB
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2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	10	14	
Presented papers	09	11	
Resource Persons		09	

#### 2.6 Innovative processes adopted by the institution in Teaching and Learning:

- The students and Staff are encouraged for participate in Conference/Workshops/Symposiums so as to have academic exposure to latest trends in Science.
- Library access to students beyond office hours during exams for better preparation.
- Students have been assigned uniform for the sake of maintenance of discipline.
- Parents Meet is conducted periodically.
- Regular guidance for different competitive exams is given.
- The modern techniques are used for teaching and learning process.
- The social responsibilities are imbibed in the students. The relevant programs are organized by the NSS
- Researchers from other Institutions are allowed to use laboratory and library facilities in the Institute.
- Analytical facilities and consultancies are provided free of cost to Researchers from other Institutions
- Students are guided and motivated to prepare concise but in-depth descriptive cards of terms/concepts pertaining to the syllabus, now popular as the "R R Pattern".

7	7	Total No.	of actual	taaching	dave	during	thic	academic v	anr

2.8	Examination/ Evaluation Reforms initiated by
the I	Institution (for example: Open Book Examination, Bar Coding,
	Double Valuation, Photocopy, Online Multiple Choice Questions)

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop

04	
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2.10 Average percentage of attendance of students

#### 2.11 Course/Programme wise distribution of pass percentage :

Title of the Programme	Total no. of students	Division					
	appeared	Distinction %	I %	II %	III %	Pass %	
Biophysics	12	8.33	50	16.66	00	75	
Biotechnology	20	23.00	23.25	41.86	11.89	100	
Botany	15	6.66	33.33	33.00	27	100	
Geology	21	19.04	66.66	00	00	86	
Microbiology	17	00	35.29	64.70	00	100	

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

The IQAC ensures the following

- Time table is strictly followed
- Teaching record and teaching plan is prepared by the faculty
- Student feedback is obtained
- The self appraisal report of the faculty is evaluated and necessary action is implemented

#### 2.13 Initiatives undertaken towards faculty development 01

Faculty / Staff Development Programmes	Number of facultybenefitted
Refresher courses	01
UGC – Faculty Improvement Programme	
HRD programmes	
Orientation programmes	
Faculty exchange programme	
Staff training conducted by the university	
Staff training conducted by other institutions	
Summer / Winter schools, Workshops, etc.	
Others	

#### 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 temporarily
Administrative Staff	16	03	13	00
Technical Staff	13	04	09	00

#### Criterion - III

# 3. Research, Consultancy and Extension

- 3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution
  - The staff members are encouraged to submit research projects to various funding agencies, pursue research work, and publish papers in peer reviewed and refereed journals participate in and organize conferences.
  - The guest lectures by eminent persons are arranged to keep the students abreast of the current developments in the subject.
  - Study tours and industrial visits are organized in order to acquaint the students with the application of their theoretical knowledge.

#### 3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	02	03	NIL	3
Outlay in Rs. Lakhs	11,41,000	47,50,000	NIL	94,15,265

#### 3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	00	01	00	03
Outlay in Rs. Lakhs	00	1,35,000	00	15,00,000

#### 3.4 Details on research publications

	International	National	Others
Peer Review Journals	19	16	01
Non-Peer Review Journals			
e-Journals			
Conference proceedings			

Tron Teer Ite view	o cumuno			i
e-Journals				
Conference proceed	edings			
Range	r of publications: Average	h-index	Nos. in SCOPUS	

# 3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration	Name of the	Total grant	Received
Nature of the Project	Year	funding Agency	sanctioned	
Major projects	2011-14	DST	17,88,000	3,00,000
Major projects	2013-15	DST	24,00,000	12,00,000
Minor Drainata	2013-15	UGC	1,90,000	1,35,000
Minor Projects	2013-14	UGC	15,000	15,000
Interdisciplinary Projects				
Industry sponsored				
Projects sponsored by the				
University/ College				
Students research projects (other than compulsory by the University)		-	1	
Any other(Specify)				
Total			43,93,000	16,50,000

3.7 No. of books published i	) With ISBN N	0.		Chapters	in Edited	d Books	01
ii) Without ISBN No.							
3.8 No. of University Departm	nents receiving	funds	s from				
UC	GC-SAP		CAS		DST-FI	ST	
DI	PE		_		DBT So	cheme/funds	·
3.9 For colleges Au	tonomy		СРЕ		DBT St	ar Scheme	
IN	SPIRE		CE [		Any Otl	her (specify	DST-FIST
3.10 Revenue generated through	gh consultancy			ents of Botany cy free-of-cos		obiology provid	ded
3.11 No. of conferences	Level	Inter	national	National	State	University	College
organized by the Institution	Number				00		03
	Sponsoring agencies	1					UGC XI Plan, New Delhi
3.12 No. of faculty served as experts, chairpersons or resource persons							
3.13 No. of collaborations	Interna	ation	al 00	National	00	Any oth	er 00

3.14 No. of linkages created during this year 12											
3.15 Total budget for research for current year in lakhs:											
Fro	m Fund	ing agenc	y <b>1</b>	6,50,000	Fron	n Manageme	nt of U	niversity/C	College	NIL	
	Total		1	6,50,000							
3.16No.	of patent	s received th	is ye	ar	_						
			Cuno (	of Patent			Num	har			
			ype (	n ratent	Annli	01 (fi		n provisiona	1		
		Nat	ional		Appli		specific	ations)			
		-			Grante Applie			-			
		Inte	ernatio	onal	Grant	ed		-			
		Cor	nmer	cialised	Appli Grant			=			
					Grand	eu		-			
				recognition	s rece	eived by facu	lty and	research f	ellows		
(	Of the in	stitute in t	the ye	ear							
	Total	Internati	onal	National	State	University	Dist	College			
	01	01									
							ı				
who ar	re Ph. D udents re	ulty from . Guides egistered u .D. award	ınder		m the In	07 31 nstitution	[	00			
3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)  JRF SRF Project Fellows 04 Any other											
3 21 N	o of sti	idents Par	ticina	nted in NSS	events						
3.211	0. 01 50	idents i di	ш	ica iii i (55	e ventes.						
						Universit	y level	100	State le	vel	
National level International level											
3.22 N	3.22 No. of students participated in NCC events:										
						Universi	ty leve	1	State le	evel	
						National	level		Interna	tional level	l

3.23 No. of Awards won in NSS:			
	University level	State level	
	National level	International level	
3.24 No. of Awards won in NCC:	University level	NA State level	NA
	National level	NA International level	NA
3.25 No. of Extension activities organization	zed		
University forum	College forum		
NCC	NSS 3	Any other	

- 3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility
  - The Institute has an NSS unit which is active since many years. The NSS unit conducts social and community services through NSS camps in and around Aurangabad city.

#### **Criterion - IV**

# 4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of	Total
			Fund	
Campus area (acres)	25		State Govt.	25
Class rooms	10		State Govt	10
Laboratories	15	-1	State Govt	15
Seminar Halls	02		State Govt	02
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	04	1	State Govt	05
Value of the equipment purchased during the year (Rs. in Lakhs)	6,00,563		State Govt	6,00,563
Others				

4.2 Computerization of administration and library

The administration section is partially computerized and therefore computerized mechanism is used for administration and process of admission.

#### 4.3 Library services:

	Existing		Newly	added	Total		
	No.	Value	No.	Value	No.	Value	
Text Books	6483	2059185	10	34996	6493	2094181	
Reference Books	2089	1462186	12	37835	2101	1500021	
e-Books	N-List	5000/yr			N-List	5000/yr	
	93000				93000		
Journals	25	446251			25	446251	
e-Journals	N-List	5000/yr			N-List	5000/yr	
	4137				4137		
Digital Database			9373				
CD & Video	77				77		
Others (specify)							

#### 4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart- ments	Others
Existing	86					09	76	01
Added								
Total	86					09	76	01

51,98,446

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up-gradation (Networking, e-Governance etc.)

The teachers have basic knowledge of computer operation and all teachers have qualified MH-CIT exam conducted by Government of Maharashtra. The computers are used by the students for preparing presentations and to obtain information from internet. Internet facility is available twenty four hours free of cost. Log books are maintained to record the usage of these facilities.

#### 4.6 Amount spent on maintenance in lakhs:

•	
i) ICT	22,270
ii) Campus Infrastructure and facilities	51,20,000
iii) Equipments	56,176
iv) Others	
Total:	51.98.446

#### Criterion - V

# 5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

Library services are made available for extended hours.

Pre university examinations are conducted.

Committee is constituted for facilitating scholarship to the students.

5.2 Efforts made by the institution for tracking the progression

Institute has constituted separate committees to cater different support activities. Result record is maintained and analysed.

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
00	180	31	00

(b) No. of students outside the state

01

(c) No. of international students

00

	No	%	
Men			Women

No	%

Last Year								Т	his Yea	r	
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
88	36	02	35			104	21	06	41		
DNT	NT	EB C	SBC	00   176	DNT	NT	EB C	SBC	00	191	
00	15	00	00			00	19	00	00		

Demand ratio

Dropout % 00

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

Guidance is given to the students for preparation of competitive examinations like NET/SET/GATE etc.

No. of students beneficiaries  All								
5.5 No. of students qualifie	d in these examination	s						
NET 05	SET/SLET	GATE 03	CAT					
IAS/IPS etc	State PSC	UPSC	Others 02					
5.6 Details of student coun	selling and career guid	ance						
counselling is done.  The various activitie Viz. Research project The students are protected the teachers for var seminars, preparing produdance is also gradient to the staff members protected. The staff members protected.	vided an access to the compious aspects like in the arrossters for participation in criven to the students for .  rovide academic and person ded and encouraged in availant formatics software and stat	uters in the department to of preparing power ponferences etc. preparation of comp al counseling to the stu- ng facilities like e-journ	ts to develop certain skills where they are guided by point presentation for the etitive examinations like dents as and when needed.					
	On campus		Off Campus					
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed					
01	12	02	30					
	cization programmes am launched for addressing then equality and respect for							
5.9 Students Activities 5.9.1 No. of students	participated in Sports,	Games and other e	vents					
State/ Universit	ty level Na	tional level	International level					

No. of students participated in cultural eve	nts
--	-----

	State/ University level		National le	evel		Intern	national level			
5.9.2	No. of medals /awards v	won by	students in Sp	orts,	Games a	and other	events			
Sports : S	State/ University level		National leve	el		Internat	ional level			
	Cultural: State/ University level National level International level  5.10 Scholarships and Financial Support									
5.10 Schol	larships and Financial Sup	pport								
					Numbe studer		Amount			
Financial support from institution										
Financial support from government 72 2,54,562										
Financial support from other sources										
Number of students who received International/ National recognitions										
5.11 Stu	dent organised / initiative	s								
Fairs	: State/ University level		National le	evel		Interr	national level			
Exhibition: State/ University level National level International level										
5.12 No.	of social initiatives unde	rtaken l	by the students	S						
5.13 Major	r grievances of students (	if any) 1	redressed	]	NIL					

#### Criterion - VI

### 6. Governance, Leadership and Management

#### 6.1 State the Vision and Mission of the institution

Vision Statement: ACCELERATING SCIENCE EDUCATION FOR HUMAN WELFARE OR ACCELERATING SCIENTIFIC TEMPERAMENT FOR HUMAN WELFARE (ENDEAVOUR)

To be a world class Science Institution, pursuing for academic and scientific excellence, catering to the needs of global community, striving for its harmonious development by inculcating life-long learning skills to serve for the socio-economic development having concern for ecology and social harmony.

#### **Mission Statement**

- To develop citizens with scientific temperament, moral and ethical values and multifaceted proactive personality by providing quality education.
- The Institute will opt for autonomy.
- The Institute will evolve system(s) to provide quality education to suit local, regional, National needs and needs that will arise due to globalization.
- The Institute will grow in multi-directions with innovative approaches to serve community at large in front line areas in this new millennium in the field of Science and Technology.
- The Institute will provide practical based training to cater the needs of the industries.
- The Institute will develop and strengthen industry-Institute participation directly in teaching-learning processes and financial aspects of the Institute.

  The Institute will start the new departments that will suit its goals, mission and objectives.

6.2 Does the Institution has a management Information Sys	62	Does the	Institution	has a	management	Information	n Syste
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No		

#### 6.3 Quality improvement strategies adopted by the institution for each of the following:

#### 6.3.1 Curriculum Development

- The institute follows the curricula approved by affiliating university.
- Most of our faculty, being the members/chairman of University Board of studies/Ad-hoc Boards, are framing the syllabi for courses offered
- Faculty regularly revises the syllabi with latest updates.

#### 6.3.2 Teaching and Learning

- The infrastructural facilities (class rooms, laboratories, girls' common room, wash rooms, staff rooms, seminar halls, etc.) in every Department are in tune with norms prescribed by the UGC. In addition, the Departments have basic to advanced infrastructural facilities such as ICT facilities, laboratory equipment, Departmental library, meeting rooms, special instrumentation room, inoculation room, chemical rooms, Departmental stores room, etc. in order to ensure hassle-free and effective teaching-learning atmosphere. The Institute is connected through Virtual Classroom Network with its sister Institutes in Mumbai and Nagpur. The provision for ICT enabled advanced audio-visual tools, interactive board etc. are being procured and erected under DST-FIST program.
- Institute also achieves quality improvement by organizing lectures and seminars for teachers and students by eminent alumni, technical experts, academicians and administrators from industries/organizations

#### 6.3.3 Examination and Evaluation

- Affiliating university conducts the final examinations asper prescribed norms.
- Institute has designed and implementing continuous evaluation during curriculum

#### 6.3.4 Research and Development

- Teachers are provided with essential laboratory facilities for carrying out research. They are also encouraged to seek funds from various funding agencies and interact with scientific community through presentation of their research work at conferences, seminars, symposia and workshops.
- Teachers are encouraged to participate in training programs which help in grooming their academic and administrative skills.
- The Institute encourages faculty members to visit foreign countries for academic and research accomplishment and for presenting their research work in International Conferences abroad and recommends names of such faculty members to the Department of Higher Education, Pune for Government permissions.

#### 6.3.5 Library, ICT and physical infrastructure / instrumentation

- Teachers are provided with essential library facilities for upgrading their knowledge.
- Online subscription of books and journals is made available through UGC-INFLIBNET to keep the academia abreast of latest literature.

#### 6.3.6 Human Resource Management

- Teachers are motivated to enhance their qualities through attending refresher courses, orientation programs, departmental training programs, summer schools, administrative training, short-term training programs, etc. which helps in grooming up their academic and administrative skills.
- Teachers are entrusted with certain duties and responsibilities in addition to the regular teaching and research activities which has resulted in honing their multitasking abilities. Accordingly various committees like Women Grievance Redressal Cell, staff and student grievance redressal cell, anti-ragging committee, Placement & Training Cell, Student Counseling Cell, and Admission Committee, Student Council Committee, Affiliation committee, Prospectus committee, Purchase committee, Scholarship committee, Hostel committee etc. have become instrumental with the help of faculty.
- The non-teaching staff is motivated to attend short term training programs such as
  those related to the use of computers, etc. They are encouraged to make use of
  computers and internet facility for administrative work.

#### 6.3.7 Faculty and Staff recruitment

The faculty & staff recruitment is as per the norms and procedures of UGC&Government Of Maharashtra.

#### 6.3.8 Industry Interaction / Collaboration

- The Institute interacts fruitfully with industries through Placement & Training Cell and consultancy-extension services. This has resulted in significant number of students getting recruited in industries through on-campus and off-campus interviews.
- The Institute regularly invites experts from industries for invited talks and academic interactions with students and faculty members so as to tune up the human resource with present trends in the industrial sectors.
- The alumni working in various industries share their experiences with the students of the Institute and guide them in building the career.
- Educational tours/industrial visits are organized for exposing the students to the latest industry trends.
- The Institute encourages and recommends M.Sc. Part I students to participate in Summer Projects in industrial units during summer vacations. This helps enriching their exposure to in-plant conditions and enhances their prospects in employment.
- The Institute has designed Skill Development Modules based on requirement of the industries to create skilled manpower customized to job requirements in the industries.
- Suggestions from industry are invited and included during revisions in the curricula.
- Efforts are being taken to initiate the constitution of an Industry-Institute Advisory Forum under STEP-IN program in order to navigate the industry interactions.

#### 6.3.9 Admission of Students

- Advertisements are made in newspapers and on the Institute Website.
- · Admissions are processed following rules and regulations of affiliating university

#### 6.4 Welfare schemes for

Teaching	Co-operative
	society
Non teaching	Co-operative
	society
Students	

6.5 Total corpus fund generated					
6.6 Whether annual financial audit ha	as been done Y	es	<b>~</b>	No	

#### 6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Inte	rnal
	Yes/No	Agency	Yes/No	Authority
Academic			Yes	DHE, Pune
Administrative	Yes	A.G. office & J.D H.E Aurangabad		

6.8 Does the Univers	sity/ Autonomous College de	clares re	esults wit	hin 30 days?	
	For UG Programmes	Yes		No	
60 What affants and	For PG Programmes	Yes		No v	ma?
0.9 what efforts are	made by the University/ Aut	Onomous	sconege	Tor Examination Reform	IIS?
Not Applica	able				
6.10 What efforts are colleges?	e made by the University to p	promote :	autonom	y in the affiliated/consti	tuent
Not applica	ble				
6.11 Activities and s	upport from the Alumni Asse	ociation			
A unique a alumni of the have a dialocate helps to more than the second se	tment has a database of alumni and ctivity is initiated as Alumni lecture institute who have made marks about the students about the students.	ure series in various contributio	(GISA in walks of on of the I	tiated alumni lecture series) life are invited to deliver lec nstitute in building their car	tures and eer. This

## 6.12 Activities and support from the Parent – Teacher Association

Parent-teacher association is yet to be established in the Institute. However, parents are invited for feedback
on the curriculum. Parents and teachers meet regularly and parents are kept appraised of the Departmental
and Institutional activities.

Alumni activities and support to the Institution and each individual department include announcements and communications about new openings and opportunities available at different institution and industries they are attached with, thus acting as a bridge for ensuring the placement of fresh

Alumni support Training and Placement Cell in organizing campus interviews, recruitment and offering

• Each year parents' meet is held in all the Departments. During the meetings, the students, their parents, Director of the Institute, Heads of the Departments and faculty members have a healthy interaction cum discussion on different issues concerning overall improvement and sustenance of quality in the education being imparted through the different courses in the Institute. A suggestion book is maintained for recording the views of the parents. Teachers give regular feedback to parents regarding the progress of students.

#### 6.13 Development programmes for support staff

postgraduates.

summer training etc.

- The non teaching staff members are motivated to use computers for the maintenance of the records, admission process and other departmental work.
- They are encouraged to participate training programs

- Tree plantation programs are organized.
- Campus cleaning programs are organized.
- Energy conservation: The Institute has adopted several practices for energy conservation such as minimizing use of energy intensive devices, use of power saving devices, solar equipment and pooling the work elements that are energy intensive. The Institute makes use of power saving CFL bulbs for illumination purposes, LED computer monitors and energy saving air conditioners/refrigerators, etc. The fans and lights are put on only when required. In the Department of Microbiology, the autoclave, ovens, hot plates, etc. are put on by authorized personnel or students only after all material is pooled and repetitious use of the instruments is avoided. The Department of Biophysics uses solar power operated water distillation unit to save energy. Solar water heater is installed in the Boys Hostel to provide hot water to the students. The Institute organizes guest lectures and poster presentations to stress the important environmental issues and the need to conserve biodiversity, energy and the environment.
- Use of renewable energy: The Department of Biophysics uses solar power operated water distillation unit to save energy. Solar water heater is installed in the Boys Hostel to provide hot water to the students.
- Water Harvesting and Check Dam Construction: The NSS unit of the Institute has constructed "VanaraiBandhara" (check dam) in order to prevent wastage of water. This has resulted in significant rise in the water level due to recharge of the wells in the campus on which the boys' and girls' hostels are dependent for washing and other purposes.
- Efforts for Carbon neutrality: The Institute staff makes minimal use of paper and green-house gas emitting devices. The Institute is about to install e-governance system in order to have paperless office. Minimization of paper is an attempt to reduce the cutting down of trees for paper manufacturing. The Institute encourages new tree plantation within the campus and also in the surrounding areas. The NSS unit of the Institute carried out tree plantation on "Hanuman Tekdi", a small hillock in the vicinity, which was barren.
- Plantation: The Institute has carried out tree plantation within the campus and also in the surrounding areas. The NSS unit of the Institute carried out tree plantation on "Hanuman Tekdi", a small hillock in the vicinity, which was barren. The faculty members of Botany Department assign the task of numbering the tree to the students as a part of practical/project work. The department has planted a number of rare and endangered medicinal plants in the Botanical Garden and in the campus.
- Hazardous waste management:
- Each department of the Institute ensures proper disposal of the potentially hazardous material/waste generated in the laboratories. The Microbiology, Biotechnology, Biophysics and Botany Departments sterilize all waste microbial cultures by autoclaving prior to disposal. Chemicals such as polyacrylamide and other hazardous chemicals are disposed using proper care. Faculty members of the Institute carry out community awareness program related to solid waste disposal. Such programs have been conducted across the state and other states as well and people are encouraged to grow flowering, fruit plants and mushrooms on household/industrial waste material.
- e-waste management: Electronic instruments and computers are used with great care in order to prevent break down of the instruments. This minimizes the generation of e-waste. Instruments beyond repairs are being processed for write-off procedures as per the Government norms.

#### Criterion - VII

#### 7. Innovations and Best Practices

- 7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.
  - The students and Staff are encouraged for participate in Conference/Workshops/Symposiums so as to have academic exposure to latest trends in Science.
  - Library access to students beyond office hours during exams for better preparation.
  - Students have been assigned uniform for the sake of maintenance of discipline.
  - Parents Meet is conducted periodically.
  - Regular guidance for different competitive exams is given.
  - The modern techniques are used for teaching and learning process.
  - The social responsibilities are imbibed in the students. The relevant programs are organized by the NSS unit
  - Researchers from other Institutions are allowed to use laboratory and library facilities in the Institute.
  - Analytical facilities and consultancies are provided free of cost to Researchers from other Institutions
  - Students are guided and motivated to prepare concise but in-depth descriptive cards of terms/concepts pertaining to the syllabus, now popular as the "R R Pattern".
- 7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year
  - The faculty members are involved in the framing and revision of syllabus as a part of various committees in the University
  - The Placement and training cell established to offer career guidance to the students and to coordinate with the Institutes and Industries for arranging in campus or off campus interviews.
  - The faculty members participated in refresher courses and STP: Foundation Training Programme of Associate Professor and Assistant Professors in Higher Education Department (Phase I, II and III)
  - The staff members are encouraged to submit research projects to various funding agencies, pursue research work, and publish papers in peer reviewed and refereed journals participate in and organize conferences.
  - The guest lectures by eminent persons are arranged to keep the students abreast of the current developments in the subject.
  - Study tours and industrial visits are organized in order to acquaint the students with the
    application of their theoretical knowledge.
- 7.3 Give two Best Practices of the institution (please see the format in the NAAC Self-study Manuals)

#### **Best Practice 1**

#### 1. Title of the Practice

Providing Experiential Training to the students

#### 2. Goal

The Institute nurtures the students in highly interdisciplinary areas of life/biosciences and Earth sciences. Hence, it is essential that in addition to their classroom and laboratory training in the concerned subjects, the students should have an exposure to real world/on-site scenarios to develop integrative approach/strategy and imbibe application oriented approach. The Institute therefore encourages experiential training through arranging various activities, viz. summer projects, industrial trainings, independent handling of research projects, self-designed seminars, participation in National and International conferences, field visits, mine training, hospital demonstrations, industry/institute visits,

etc. Competitive exam skill development initiatives and guidance by alumni/invited experts prepare the students for qualifying National level competitive tests.

#### 3. The Context

The students admitted in the Institute are mostly from educationally under privileged Marathwada region. They are unaware of their in-built talent and skills. Due to the lack of academic exposure they cannot decide about their career goals and the utility of the subject in which they are trained. Moreover, the students are reluctant in opting the academic career through National/Global level competitive examinations. The Institute has developed extensive pre-admission counseling mechanism to reduce/remove the fear and phobia about higher studies and assist in choice of subject at M.Sc. level. Mere classroom teaching does not effectively eliminate the senile attitude towards their career honing. Therefore the Institute has seriously addressed this problem by designing multi-directional approach that caters self-learning; developing interest, using interdisciplinary, integrative and object-oriented strategy in learning; broadening of knowledge grasp; analyzing situations and inculcating problem solving/solution finding attitude.

#### 4. The Practice

- Explaining concepts orally to audiencefacilitates a deeper understanding of the subject. Knowledge
  dissemination always catalyzes the knowledge grasp. Keeping this in mind, the Institute motivates the
  students to design and deliver information/concept-based seminars during their curriculum. The display of
  synopsis, presentation skeleton, overall organization of the seminar events, evaluative feedback/interactive
  discussion is completely managed by the students which self-mentor their leadership qualities.
- The linkage between classroom learning and field-experience is established through regular visits to industries, research institutes, hospitals, mines, field visits, etc. Here, the students explore new dimensions in the practical application of the subject knowledge. Exhaustive interactions on varied queries by the students with field experts stimulate thirst for learning.
- The Institute strongly believes in enrichment of teaching-learning process using research based approach in
  concerned subjects. As a consequence the students are allotted with mini-research projects as a part of
  academic curriculum. Students develop research aptitude by familiarizing with research methodology,
  analytical tools, data analysis, interpretation skills and presentation skills while implementing these projects
  independently.
- Students are motivated to undertake summer projects/in-plant training in various organizations/industries/research laboratories outside the Institute, to give them first-hand experience of the organizational settings. They get familiarized with latest trends, quality principles, processing techniques, instrumentation, need for documentation and documentation procedures.
- Students participate enthusiastically in National and International conferences, present research papers/posters, interact with the scientific community and develop contacts that may be useful in their future endeavors. This helps in building up their confidence, will-power and morale.
- Real life/on-site experiences shared by the invited experts, faculties, scientists, entrepreneurs, industry personnel and our alumni with our students culminate in imbibing ethical values and personality traits viz. pride towards the Institute, down-to-earth analytical approach, methodologically buffered strategy, descriptive & illustrative approach.
- Exam skill and experience sharing by alumni who have successfully qualified the competitive examinations developed a positive attitude amongst the students. Students have since then opted enthusiastically to appear in the NET/SET/GATE and other competitive examinations.

#### 5. Evidence of Success

• Seminars presentations have enriched the qualities within the students, viz. gathering the information, designing the talk/presentation, preparing the display slides using computers, co-assisting the presentations with animations, simulating examples, boldness, confidence, clarity of thoughts, integrating information and logic of bridging the concepts, communication skills, analyzing the questions raised and giving appropriate answers, effective use of audio-visual devices and white-board. As a result students could confidently present papers in conferences and interact with scientific community.

- The knowledge acquired through field exposures, summer projects and research projects could successfully amalgamate the theoretical concepts with practical utility which further assisted them in diagnosing and curing the problems/challenges faced in actual work environment. As a result students had a chance to be in vicinity with National and Global experts in research laboratories/industries from whom they could build their personality and contribute significantly to the growth of their organizations. The coveted positions held by alumni highlight the result of these efforts.
- Moral boosting lectures by alumni/invited experts sharing real life/on-job experiences has thoroughly
  revolutionized the students' mind with strong will to undertake/handle tough challenging situations. The
  students visualize& follow these mentors as their Role Models and as a result there is boost in the placement
  percentage within last couple of years.
- The in-house coaching for competitive examinations has yielded success to several students in opting and tackling the National level competitive examinations.

#### 6. Problems Encountered and Resources Required

- The weak academic background and fear within the students poses challenge for the mentoring process. The
  challenge is further enhanced in case of the economically weaker sections of the students. The strong
  counseling with little financial assistance at the personal level circumvents these difficulties to certain extent
  favoring the mentoring process.
- The weak communication abilities consequently leading to shyness within the students was another hurdle in the teaching-learning. The faculty members devoted extra time in building up the communication ability and curb the shyness. The family-like and congenial atmosphere maintained within the Institute further catalyzes the mentoring process.
- Owing to low budgetary provisions, the Institute cannot support economically weaker students for participating in out-station co- and extra-curricular activities. Separate provisions of finances would certainly boost the participation.
- Student-centric activities enlisted in the "Goals" above, if supported with additional financial assistance, can capture momentum and can be extended to needy students from other Institutions as well.

#### 7. Notes (Optional) Nil

#### 8. Contact Details

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#### **Best Practice 2**

#### 1. Title of the Practice

Nurturing value-based education, social responsibilities and good citizenry

#### 2. Goal

With an aim of carving value based education and social awareness amongst the students and facility extension and information dissemination to the community, the Institute has launched various programs, viz. women empowerment program; "JagarJanivancha"; special day programs; blood donation camps; awareness and conservation programsforclean and green environment inclusive water conservationandecofriendly aspects- tree plantation, check dam construction, solid waste treatment and nutrient recycling;inculcation of valuebased education, socio-sensitivity, and facility extension services like soil analysis, ground water exploration and testing, gamma irradiation, providing microbial culturesas well as popularization of science; voter awareness campaigns.

#### 3. The Context

The Institute being a Post Graduate and Research Organization caters the academic needs of the region. In addition to academics, the societal components also expect creation of sensible human resource with high human values and sensitivity towords social climate as well as science-based extension services. In order to bridge the gap between academic training and the societal expectations, the Institute has structured multi-faceted programs that cater sociosensitivity, environmental awareness and ethical values. In addition, the Institute takes the responsibility to extend the available facilities and expertise to community welfare and nurture scientific temper amongst the community through science popularization programs.

#### 4. The Practice

- Conserving the green areas of the Institute campus to preserve and protect the large number of bird and animal species while ensuring neat, clean and green environment.
- The campus waste is converted into Organic Manure through composting and vermin-culture and is used for gardening and *in-campus* plantation.
- The Institute has conducted numerous community programs within and out of Aurangabad city to create awareness about Solid Waste Disposal.
- Research projects are undertaken with the view towards remedial treatment of toxic and hazardous industrial
  wastes using microbial and nanotechnology based methods.
- The faculty members have carried out extensive work on the biodegradation and conservation of historical monuments viz. Ajanta and Aurangabad Caves.
- The Institute provides extension services to the community for routineanalysis of water to ensure a healthy community and environment.
- Under the umbrella of the NSS, Institute carries out various environment related activities such as Tree Plantation within and out of the Institute campus, street plays, construction of check dam for water conservation, etc. The Institute has adopted several practices for energy conservation such as use of power saving devices, solar equipment, etc. The Institute organizes guest lectures and poster presentations to stress the important environmental issues and the need to conserve energy, biodiversity and the environment.
- The Institute runs programs such as adoption of villages for tree plantation advocating avoidance of using of pesticides, using organic manure, lectures by experts for rain water harvesting, etc.
- The NSS unit also organizes blood donation and health awareness camps.
- Students voluntarily participated in Disaster Management Relief Fund by fully donating Annual Gathering funds to Tsunami Victims.
- "JagarJaniwancha", a special lecture series aimed towards inculcating sensitivity and courageous attitude to address societal problems and illiteracy among women was organized by the Institute.
- Enrichment of managerial qualities amongst women was the main aim in hosting a week-long workshop on Women Empowerment under the aegis of UGC.
- In order to pay tributes to National personalities and inculcate the feeling of National Pride and social responsibility, special day programs are organized.
- The Institute extends some facilities and scientific expertise to community. These facilities include soil analysis, ground water exploration and testing, gamma irradiation and supply of microbial cultures to college teachers, researchers and industry.

- The Institute being scientific avenue, dissemination of scientific information to the masses is practiced through mass communication media (radio talks), newspaper articles and organizing National Science Day programs and contribution of faculties as resource persons.
- The Institute actively participates in launching Voter Awareness Campaign at the time of general elections.

#### 5. Evidence of Success

- The overall environmental awareness and a strong ecofriendly attitude were imbibed amongst the students. Students could learn composting method and conservation practices for keeping the environment clean and green.
- The Institute received appreciation for the effective implementation of solid waste disposal methods, preservation of cultural heritage and city farming programs organized in community places such as jails, temples, co-operative housing societies, schools, etc.
- The research papers published and presented in scientific congregations have provided additional information content in terms of environmental remediation. Students were equipped with the tools and techniques to develop sustainable and eco-friendly processes and products.
- The community was benefitted through the extension services.
- Tree plantation, check dam construction and CCT activities have created awareness about soil and water conservation.
- The Institute successfully conveyed the importance of avoiding pesticides, use of organic manure and rain water harvesting to the villagers under village adoption programs.
- The awareness about health and precious lives was effectively conveyed through health awareness and blood donation camps.
- Women empowerment program, special day programs, "JagarJaniwancha" and voters awareness campaign have conveyed the message of gender equality, support and respect for women, National pride and social rights and responsibility.
- The Institute has profoundly contributed in popularization of science through various activities and expert lectures benefitting the schools, colleges and general public.

#### 6. Problems Encountered and Resources Required

- The students and faculty members being engaged full-time in lectures, practical, projects and mentoring for research, the major limitation to the implementation of these extra-curricular activities is time availability.
- Lack of financial aid for village adoption and other community services was another major obstacle in implementation of these programs.

#### 7. Notes (Optional)

Nil

#### 8. Contact Details

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#### 7.4 Contribution to environmental awareness / protection

- Tree plantation programs are organized within the Institute and in the surrounding areas.
- Campus cleaning programs are organized.
- Institute organizes guest lectures and poster presentations to stress the important environmental issues and the need to conserve biodiversity, energy and the environment.
- The NSS unit of the Institute has constructed "VanaraiBandhara" (check dam) in order to prevent wastage of water and aid in the rise in water table.
- The faculty members of Botany Department assign the task of numbering the tree to the students as a part of practical/project work. The department has planted a number of rare and endangered medicinal plants in the Botanical Garden and in the campus.
- Each department of the Institute ensures proper disposal of the potentially hazardous material/waste generated in the laboratories.
- Electronic instruments and computers are used with great care in order to prevent break down of the instruments. This minimizes the generation of e-waste. Instruments beyond repairs are being processed for write-off procedures as per the Government norms.

being processed for write-off procedures as	s per the Government norms.			
.5 Whether environmental audit was condu	cted? Yes No V			
.6 Any other relevant information the institu	ution wishes to add. (for example SWOT Analysi			
Plans of institution for next year				
<ul> <li>Tapping of funds from different funding agen</li> <li>Purchase of sophisticated equipment, establis under DST-FIST sanctioned project.</li> <li>Designing and implementation of different acknowledge through invited talks from industr</li> <li>Arranging and execution of study tour for keewith the subject.</li> <li>Active promotion of student participation in sconferences and workshops.</li> <li>Development and promotion of placement cecompletion of course.</li> <li>Encouraging students to publish papers relationational/international journals.</li> </ul>	ching the computer laboratory and smart classroom ctivities aimed at improvement of student skill and y and academia. eping abreast with recent trends across fields related summer training, national/international symposia,  Il for placing the students immediately on			
ame: Dr. A. V. Pethkar	Name: Dr. R. R. Deshpande			
	Brown of So			
ignature of the Coordinator, IQAC	Signature of the Chairperson, IQA			

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