

Evaluative Report of the Department of Applied Science and Mathematics

1. Name of the department: Applied Science and Mathematics

2. Year of Establishment: 1984

3. Names of Programmes / Courses offered: Nil

4. Names of Inter disciplinary courses and the departments/units involved: Nil

5. Annual/ semester/choice based credit system (programme wise)

Sr. No	Name of the programme	Pattern/System(Annual/semester/choice based credit system)
1	FE Engineering	Semester wise credit based system (From AY 2015-16)

6. Participation of the department in the courses offered by other departments

Sr. No	Name of Department	Name of Course
1	All Department F.E.	Engineering Chemistry
2	All Department F.E.	Engineering Physics
3	All Department F.E.	Engineering Mathematics I
4	All Department F.E.	Engineering Mathematics II
5	All Department S.E.	Engineering Mathematics III
6	All Department P.G.	Mathematics
7	Chemical Department S.E.	Chemistry I & II

7. Courses in collaboration with other universities, industries, foreign institutions, etc.: Nil

8. Details of courses/programmes discontinued (if any) with reasons: Nil

9. Number of Teaching Posts

First Shift

	Sanctioned			Filled		
	Maths	Physics	Chemistry	Maths	Physics	Chemistry
Professors	01	00	00	01	00	00
Associate Professors	02	01	01	01	01	01
Assistant Professors	08	03	04	09	03	04

Second Shift

	Filled		
	Maths	Physics	Chemistry
Professors	00	00	00
Associate Professors	00	00	00
Assistant Professors	02	01	01

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. /M. Phil. etc.,)

Sr. No	Name	Qualification	Designation	Specialization	No. of years of Experience (A+B)*	No. of Ph.D Students Guided for the Last 4 years
1	Dr. Shantaram. N. Kadlag	Ph.D.	Professor & HOD.	Mathematics	34y,10m,1d	NA
2	Dr. Sukhdev. S. Naik	Ph.D.	Associate Prof	Mathematics	28y,6m,15d	NA
3	Snehal. S. Joshi	M. Phil.		Physics	28y,2m,12d	NA
4	Dr. Ansari A.W.M.H.	M.Sc.		Chemistry	17y,6m,16d + 4y	NA
5	Chandrashekhar G. Upasani	Ph.D.	Assistant Professor	Chemistry	33y,5m,10d	NA
6	Dnyaneshwari. Y. Patil	M.Sc.		Chemistry	9y,7m	NA
7	Archana. L. Mourya	M.Sc.		Mathematics	9y+ 1y	NA
8	Suman S. Kahandal	M.Sc.		Chemistry	4y,10m+2y	NA
9	Dr. Anuradha C. Pawar	Ph.D		Physics	7y,6m + 5y	NA
10	Prachi S. Shahir	M.Sc Tech.		Mathematics	7y,7m	NA
11	Hemant S. Tajanpure	M.Sc.		Mathematics	6y,9m,5d	NA
12	Prajakta S. Shirode	M.Sc.		Mathematics	5y,9m,6d	NA
13	Rupali S. Unhale	M.Sc.		Mathematics	5y,9m,22d	NA
14	Monali J. KShirsagar	M.Sc.		Mathematics	4y,8m,30d	NA
15	Sagar M. Shinde	M.Sc.		Chemistry	4y,8m,10d	NA
16	Suchita Y. Nerkar	M.Sc.		Mathematics	6y,6m +3y	NA
17	Archana S. Aachari	M.Sc.		Mathematics	2y,10m,4d+5y	NA
18	Dange G. N.	M.Sc Tech.	Mathematics	7m,4d	NA	
19	Vasant N. Chavhan	M.Sc.	Mathematics	3y,3m +4y	NA	
20	Patil Snehal	M.Sc.	Physics	2m,14d+2y	NA	

*A – Teaching Experience in K.K. Wagh Education Society

*B – Teaching Experience in other institute + Industry

11. List of senior visiting faculty: Nil

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary Faculty A.Y.: 2017-18

Semester II

Sr. No	Class	Lect. Delivered By temp faculty/Total Lectures conducted for the class (A/B)	PracticalsHandled By temp faculty/Total Practicalshand+ Lect. for the class (C/D)	Total (A+C)/(B+D)	Percentage
1	FE (A)	87/212	48/108	0.854	85.48
2	FE (B)	58/260	84/302	0.249	24.9
3	FE (C)	68/231	70/328	0.253	25.37
4	FE (D)	79/234	40/91	0.390	39.0
5	FE (E)	17/247	90/308	0.179	17.9
6	FE (F)	14/257	206/300	0.370	37.02
7	FE (G)	16/247	78/294	0.164	16.45
8	FE (H)	19/244	24/175	0.107	10.71
9	FE (I)	69/242	50/115	0.359	35.99
10	FE (J)	16/240	51/108	0.268	26.8
11	FE (k)	0/220	76/326	0.116	11.66
12	FE (L)	45/227	34/282	0.159	15.9
13	FE (M)	45/225	18/268	0.133	13.35
14	FE (N)	0/221	0/234	0.0	0.0

Semester I

Sr. No	Class	Lect. Delivered By temp faculty/Total Lectures conducted for the class (A/B)	PracticalsHandled By temp faculty/Total Practicalshand+ Lect. for the class (C/D)	Total (A+C)/(B+D)	Percentage
1	FE (A)	277/322	305/323	0.9002	90.02
2	FE (B)	70/240	156/366	0.3589	35.89
3	FE (C)	144/241	240/352	0.8161	81.62
4	FE (D)	181/218	296/408	0.7775	77.75
5	FE (E)	174/238	211/375	0.6468	64.68
6	FE (F)	124/224	183/329	0.5548	55.48
7	FE (G)	159/240	216/370	0.6231	62.31
8	FE (H)	234/234	268/398	0.8366	83.66
9	FE (I)	180/222	114/177	0.7275	72.76
10	FE (J)	149 / 211	168 / 360	0.5863	58.63
11	FE (k)	185/230	246/410	0.7021	70.21
12	FE (L)	154/188	338/378	0.8566	85.66
13	FE (M)	171/218	206/316	0.7182	71.82
14	FE (N)	193/202	157/189	0.893	89.3

13. Student -Teacher Ratio (programme wise)

	2017-18	2016-17	2015-16	2014-15	2013-14
UG	20.99	16.88	16.81	17.71	17.5

14. Number of academic support staff (technical) and administrative staff

Sr. No	Type of Staff	Sanctioned	Filled
1	Support Staff (Technical)	-	1
2	Laboratory Assistant	-	5

15. Qualifications of teaching faculty with D.Sc/ D.Litt/ Ph.D/ MPhil / PG

Ph.D.	M.Phil	PG
04	01	15

16. Number of faculty with on-going projects

a) National: 1

b) International: Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR and total grants received

Sr. No	Project Funded by	Duration	principal Investigator	Project title	Grant Sanctioned in Rs.
1	University (BCUD)	2014-2016	S. S. Joshi	Synthesis of tin sulphide thin film	140,000
2	University (BCUD)	2014-2016	D.Y. Patil	Synthesis & selective recognition of cationic/anionic complexes of quinoline derivatives	190,000

18. Research Centre /facility recognized by the University: Nil**19. Publications:**

Number of paper published in peer reviewed journal (Staff and Student): 20

Number of publication listed in international database: Nil

Books with ISBN Number /ISSN Number with detail of publisher: Nil

20. Areas of consultancy and income generated – Nil

21. Faculty as members in**a) National Committees:**

Sr. No.	Name of the Faculty	Name of the Committee
01.	Prof. Dr. A.W.M.H. Ansari	B.O.S. Member, North Maharashtra University.
02	Prof. Dr. S. N. Kadlag	B.O.S. Member, Sandip University

b) International Committees: (Reviewers of journal, transactions) - Nil**c) Editorial Boards** – Nil**22. Student projects:** Nil**23. Awards / Recognitions received by faculty and students**

Sr. No.	Name of Faculty	Year of Achievement	Achievement	Place/College of Event
1	Dr. S. N. Kadlag	2013	30 Years Completion	K.K.W.I.E.E.R.
2	Dr. A.W.M.H. Ansari	2013	10 Years Completion	K.K.W.I.E.E.R.
3	Prof. C. G. Upasani	2013	30 Years Completion	K.K.W.I.E.E.R.
4	Mrs. S. S. Joshi	2010	20 Years Completion	K.K.W.I.E.E.R.
5	Dr. S. S. Naik	2009	20 Years Completion	K.K.W.I.E.E.R.

24. List of eminent academicians and scientists / visitors to the department

Sr. No	Name	Designation	Date of Visit	Activity
1	Dr. U. C. De	Professor	14/04/2014, 15/04 2014	Talk on Application of Mathematics in Engineering
2	DevdattaGokhale& RashmiGokhale	Lecturer	26/08/2016 27/08/2016	Effective studies,communication,presentation
3	DevdattaGokhale& RashmiGokhale	Lecturer	08/01/2016, 11/01/2016 13/01/2016	Effective studies,communication,presentation
4	DevdattaGokhale& RashmiGokhale	Lecturer	26/08/2014, 27/08/2014, 21/02/2015 26/02/2015	Effective studies,communication,presentation
5	Prof. Sudarshan Garge	Lecturer	26/09/2017	Training and Grooming Programme
6	Shri Devdatta Gokhale	Lecturer	23/03/2018	Effective studies,communication,presentation

25. Seminars/ Conferences/Workshops organized & the source of funding

Sr.No.	Name of Department	Name of College	Date of Visit	Workshop conducted
1	Applied Science And Mathematics	K.K.W.I.E.E.R	14/12/2014	M III

26. Student profile programme/course wise:

Name of the Course /programme	Academic Year (Graduation)	Applications received	Enrolled		Total
			*M	*F	
First Year UG	2017-18	Applications are submitted through ARC to DTE	575	261	836
First Year UG	2016-17		413	194	607
First Year UG	2015-16		381	237	618
First Year UG	2014-15		377	260	637
First Year UG	2013-14		388	242	630
Second Shift	2017-18		156	70	226
First Year UG	2016-17		161	66	227
First Year UG	2015-16		178	60	238
First Year UG	2014-15		177	64	241
First Year UG	2013-14		160	75	235

*M = Male * F = Female

27. Diversity of Students**FE Engg. - First Shift**

Name of the Course	Year	% students from same state	% students from other state	% students from abroad
FE Engg.	2017-2018	99.42	0.58	Nil
FE Engg.	2016-2017	98.52	1.48	Nil
FE Engg.	2015-2016	98.54	1.46	Nil
FE Engg.	2014-2015	98.58	1.42	Nil
FE Engg.	2013-2014	98.57	1.43	Nil

FE Engg. - Second Shift

Name of the Course	Year	% students from same state	% students from other state	% students from abroad
FE Engg.	2017-2018	99.2	0.8	Nil
FE Engg.	2016-2017	100	0	Nil
FE Engg.	2015-2016	100	0	Nil
FE Engg.	2014-2015	99.58	0.42	Nil
FE Engg.	2013-2014	100	0	Nil

28. How many students have cleared national and state competitive examinations such as NET, SET, GATE, Civil services, Defence services, etc.: Nil

29. Student progression: Nil

30. Details of Infrastructural facilities

a) Departmental Library

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Books	180	360	204	30	07	09	00
Cost	60,736/-	1,48,598/-	79,265/-	9,970/-	6,073/-	5,875/-	00
On line journals							
ASME on line	00	00	00	00	00	29	28
Science Direct	00	00	00	00	00	275	275
Printed journals	00	00	00	00	00	21	21

b) Internet facilities for Staff & Students:

Sr. No	Description	Qty
1	internet Leased line -2 BSNL - 155 MBPS & TATA 10 MBPS	16 computers 2 Laptop
2	Firewall - Cyberoam 100ia	
3	Layer 3 Switch (Manageable) Cisco 3560	
4	WEB Server, ERP Servers, Application Server, Tally Server	

c) Class rooms with ICT facility: Nil

d) Laboratories

Sr. No	Name of Laboratory	Available Area in Sq. Metres.
1	Engineering Chemistry	78.75 Sq.metres.
2	Engineering Physics	105 Sq.metres.

31. Number of students receiving financial assistance from college, university, government or other agencies

Academic Year	SC Schol arship	OBC Schol arship	VJNT Schol arship	SBC Schol arship	ST Schol arship	SC Frees hip	OBC Frees hip	VJN T Free ship	SBC Free ship	ST Frees hip	EBC
2017-18	30	97	43	2	12	41	109	29	6	17	79
2016-17	32	129	40	1	17	43	139	32	9	11	51
2015-16	38	104	50	10	10	36	59	19	02	14	59
2014-15	17	110	37	02	18	26	63	07	06	12	43
2013-14	24	95	41	06	14	34	132	34	09	09	43

32. Details on student enrichment programmes (special lectures / workshops /Seminar) with external experts: Nil

33. Teaching methods adopted to improve student learning

1. Chalk and talk method, LCD projector, OHP, Power point presentation techniques.
2. Providing question bank for In Semester and Model question paper for End Semester exam to the students.
3. Incorporated Teacher Guardian scheme to focus on each student & solve their problem individually regarding teaching learning process
4. Semester exams have been kept for the students to make them study regularly.
5. Every month attendance report & In-Semester exam marks are shown to the students. Parents-teacher meeting is conducted one month before the end semester, so that parents get aware about the progress of the students and take necessary actions.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

1. First Prize, second prize of the topper of each branch every year.
2. Donation to non-teaching staff (Peon) if it meets to accidents.
3. Donation of new clothes to old peoples of Matoshri Vrudhashram.
4. Donation to Blind Association, Nasik Road every year.

35. SWOC analysis of the department and Future plans

STRENGTHS:-

1. Futuristic visionary management help to achieve excellence in technical education.
2. An exceptionally dedicated and well trained highly qualified faculty and committed staff with effective team work culture that have a keen interest in the development of the department
3. An excellent, diverse and intelligent and high merit students willing to acquire basic as well as advanced knowledge.
4. Ongoing research in emerging areas of science and technology helping to shape the policies to meet up global challenges in technology
5. Have a good Infrastructure, classroom, well equipped Laboratories.

6. Disciplined and conducive learning environment

WEAKNESSES:-

1. Number of faculty with Ph.D. qualification and Marginal research publications in International Journals.
2. Lack of consultancy work

OPPORTUNITIES:

1. Strong Support from the Institute
2. Support for organizing various activities like expert talk, parents teachers meet
3. Potential for collaboration with reputed foreign universities
4. Faculty and staff development through exposure to world class academic and research institutions

CHALLENGES:

1. Sustained landmark contributions through a well regulated teaching learning process and research for solving real life problems.
2. Ensuring that the students are the main beneficiaries from the department's teaching and research programmes.
3. Encourage under-graduates to think multi-dimensionally.
4. To develop base required for Centres of Excellence in Green Sustainable Emerging Technologies.

FUTURE PLANS:

1. Planning to apply for major/minor research projects to research and government institute like DRDO, DST, BCUD and AICTE.
2. To enhance R&D activities.