

Chemistry Department

SIR P. T. SCIENCE COLLEGE, MODASA

Name of the Department : **Chemistry**

Year of Establishment : **1960**

Courses offered :

B.Sc. : (UG) [From : 1960] General Chemistry

M.Sc. : (PG) [From : 1991] Organic Chemistry

PRESENT FACULTY MEMBERS

Name : Dr. K. P. Patel
Designation : Principal
Qualification : M.Sc., M.Ed., Ph.D.
Specialization : Inorganic Chemistry
Experience : UG- 22 years; PG - 15 years



Name : Dr. Divya G. Acharya
Designation : Head of the Department
Qualification : M.Sc., B.Ed., Ph.D.
Specialization : Organic Chemistry
Experience : UG- 28 years; PG - 21 years



Name : Dr. Manoj P. Gongiwala
Designation : Associate Professor
Qualification : M.Sc., Ph.D.
Specialization : Organic Chemistry
Experience : UG - 23 years; PG - 17 years



PRESENT FACULTY MEMBERS

□ Name : Dr. Dinesh R. Fudani
Designation : Associate Professor
Qualification : M.Sc., B.Ed.(Gold medalist),Ph.D.
Specialization : Organic & In-organic Chemistry
Experience : UG - 22 years; PG - 16 year



□ Name : Dr. Shailesh V. Patel
Designation : Associate Professor
Qualification : M.Sc., Ph.D.
Specialization : Physical Chemistry
Experience : UG - 21 years ; PG - 17 years



□ Name : Dr. Shailesh M. Dave
Designation : Assistant Professor
Qualification : M.Sc., Ph.D.,M.ed.
Specialization : Organic Chemistry
Experience : UG - 22 year ; PG - 06 years



PRESENT FACULTY MEMBERS

□ Name : Dr. Jayshreeben N.Patel
Designation : Assistant Professor
Qualification : M. Sc., Ph.D.
Specialization : Inorganic Chemistry
Experience : UG – 06 year ; PG – 03 years



□ Name : Bhoomi Patel
Designation : Adhoc lecturer
Qualification : M.Sc.
Specialization : Organic Chemistry



Lab. Staff of the Department

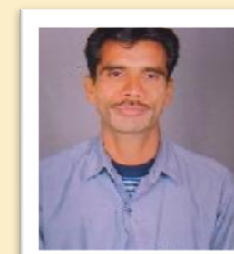
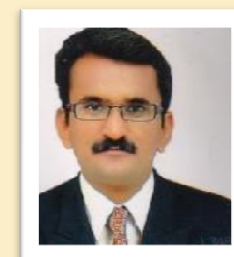
Laboratory Staff

- Name : Mr. Minesh P. Gandhi
Designation : Lab Assistant
Qualification : M.Sc. (Chemistry)
Experience : 18 years

- Name : Mr. Kamesh B. Shah
Designation : Lab Assistant
Qualification : B.Sc. (Chemistry)
Experience : 18 years

- Name : Mr. Vastabhai K. Parmar
Designation : Lab Hamal
Qualification : 12th Pass (Lab Hamal)

- Name : Mr. Pankajbhai C. Sha
Designation : Lab Hamal
Qualification : 12th Pass (Lab Hamal)



Lab. Staff of the Department

Name : Mr. Sandip Shah
Designation : Lab Assistant
Qualification : Diploma Pharmacy
Experience : 18 years



Name : Mr. Himanshu Sagar
Designation : Sevak (Lab .)
Qualification : 12th Pass



Name : Mr. Bharat Prajapati
Designation : Sevak (Lab.)
Qualification : 12th Pass



Eminent visiting faculty in PG

No	Name	Designation	Specialization
1	Prof. Anamik Shah	Vice chancellor of Gujarat Vidhyapith , Ahmedabad	Organic Chemistry
2	Prof. N.C.Desai	Former H.O.D, Bhavnagar Uni.Bhavnagar	Organic Chemistry
3	Prof.C.P. Bhasin	Professor of Chemistry Dept. HNGU Patan	Organic Chemistry
4	Prin. S.S.Shah	Principal, Arts , Science & Commerce College, Pilvai	Organic Chemistry
5	Prin. K.S.Parikh	Principal, Science college, Patan	Analytical Chemistry

Eminent visiting faculty in PG

No.	Name	Designation	Specialization
6	Dr. R.C. Ameta	Professor, Science College, Banswada(Raj.)	Organic Chemistry
7	Dr. R .S . Dave	HOD, Chem. Dept. Arts & Science college, Pilvai	Inorganic Chemistry
8	Dr. K.N.Patel	Associate Professor, Arts & Science college, Pilvai	Organic Chemistry
9	Dr. Z.M.Gadhawala	P.G. Incharge in Chemistry, Science College, Himatnagar.	Organic Chemistry
10	Dr. G.R.Jani	Assistant Professor in Chem. Arts & Science college, Pilvai	Physical Chemistry

COURSES AVAILABLE (B.Sc.)

Program me	Semester/ year	Course offered		
		Core Compulsory	Subject Elective	Generic course
B. Sc.	Semester-I	CC CH 101 Practical core course - I	SE CH 101 (Agricultural chemistry)	Communication Skills
	Semester-II	CC CH 201 Practical core course - I	Instru. Measurement & Analysis	Disaster management
	Semester-III	CC CH 301 CC CH 302 Practical core course - I	SE CH 301 (Environmental pollution)	Environment Chemistry
	Semester-IV	CC CH 401 CC CH 402 Practical core course - I	SE CH 401 (Green Chemistry)	Personality Development
	Semester-V	CC CH 501 CC CH 502 CC CH 503 CCCH 504 Chem. Practical	SE CH 501 A (Paint & Varnish)	Indian Constitution
	Semester-VI	CC CH 601 CC CH 602 CC CH 603 CC CH 604 Chem. Practical	SE CH 601 A (Polymer Chem.)	Naturopathy

COURSES AVAILABLE (M.Sc.)

Program	Semester/ year	Course offered	
		Core Compulsory	Subject Elective
M. Sc.	Semester-I	CHN-401 Inorganic CHN-402 Organic CHN-403 Physical Practical core course – I, II & III	CHN-404 A (Group Theory)
	Semester-II	CHN-501 Inorganic CHN-502 Organic CHN-503 Physical Practical core course – I, II & III	CHN-504 A (Spectroscopy)
	Semester-III	CHN-601 Organic CHN-602 “ CHN-603 “ Practical core course – I Practical core course – II Practical core course – III	CHN-604 A (Organic Photochemistry)
	Semester-IV	CHN-701 Organic CHN-702 “ CHN-703 “ Practical core course – I Practical core course – II Practical core course - III	CHN-704 A (Organometalic Compound)

Infrastructural facilities of the Department

- ❖ Laboratory With Preparation Room : 04
- ❖ Primary Research Laboratory
- ❖ Class rooms with ICT facility
- ❖ Rain water harvesting storage Tank
- ❖ Store Room & Acid Room
- ❖ H.O.D Chamber, Staff Room
- ❖ Gas Room
- ❖ Computer with internet facility : 02

Equipments Facility

D.M. RO Plant (Ion-Exchange)	01	Thermo State	04
Spectrophotometer	02	Generator	01
Flame photometer	02	TLC Set	01
Electrical Centrifuge	01	Microve oven	01
Digital Polarimeter	01	Oven	02

And Potentiometer, Conductometer , PH Meter(Digital), Colorimeter , Refractometer, Scientific Balance , Laser Printer, Electronic Balance , Viscometer, Stelegmo meter are in sufficient quantity.

Teaching Methods

Following methodology are used for UG & PG Teaching

- Lectures by Using Blackboard & PPT presentations
- Charts, 3D - Models of molecules
- Unit Tests, Assignment Work,
- Demonstration of practical
- Seminar by students, New method in Practical,
- Group discussion, Book Review & Quiz Competition
- Active participation through question-answering

Student -Teacher Ratio (programme wise)

Year	Programme	No of Students (X)	No of Teachers (Y)	Students- Teacher Ratio (X/Y)
2010-2011	B.Sc.	411	06	68:1
	M.Sc.	41	06	7:1
2011-2012	B.Sc.	408	07	58:1
	M.Sc.	37	06	6:1
2012-2013	B.Sc.	482	07	69:1
	M.Sc.	46	07	6:1
2013-2014	B.Sc.	538	07	77:1
	M.Sc.	50	07	7:1
2014-2015	B.Sc.	595	06	100:1
	M.Sc.	40	06	7:1
2015-2016	B.Sc.	624	06	104:1
	M.Sc.	52	06	8:1
2016-2017	B.Sc.	634	07	91:1
	M.Sc.	54	07	8:1

UG, PG Results (Last Five Years)

Year	Programme	Number of Students	Result (%)
2011-2012	B.Sc.(Final)	57	100 %
	M.Sc. .(Final)	09	100 %
2012-2013	B.Sc.(Final)	78	64 %
	M.Sc. .(Final.	21	100 %
2013-2014	B.Sc.(Final)	74	92 %
	M.Sc. .(Final	26	96 %
2014-2015	B.Sc.(Final)	89	73 %
	M.Sc. .(Final).	16	94 %
2015-16	B.Sc.(Final)	126	78 %
	M.Sc. .(Final)	17	94 %
2016-17	B.Sc.(Final)	123	73 %
	M.Sc. .(Final)	28	89 %

Minor Research Project (Completed)

Principle Investigator	Title of Research Project	Funding Agency	Amount Rs.	Duration	Sanction No. & Date
Dr. K. P. Patel	Synthesis, characterization, Spectral & antimicrobial toaqueous and mixed solvents.	U.G.C.	1,48,500/-	2 years	47-852/09 (WRO) 4 th Sept, 2009
Dr. D.G.Acharya	STUDIES ON WATER QUALITY OF SEVERAL VILLAGES OF MODASA TALUKA FOR DRINKING & IRRIGATION	U.G.C.	85,000/-	2 years	F.NO. 47-539/08 (WRO)
Dr. S.V.Patel	VISCOMETRIC STUDY OF CARBOXYLATED OLIGOIMIDES (COIS)	U.G.C.	250,000/-	2 years	F.NO. 47-615/2013 (WRO)
Dr.J.N.Patel	STUDIES ON CHELATING PROPERTIES OF POLYMERIC LIGANDS DERIVED FROM BISMALIMIDES	U.G.C.	3,75,000/-	SANCTIONED	F.NO. 47-1184/14 (WRO)

No. of RESEARCH PAPERS Published (By Faculty) during Last 7 Years

Name of Faculty	International	National	Total
Dr. K.P.Patel	13	03	16
Dr. D.G.Acharya	00	03	03
Dr.M.P.Gongiwala	00	00	00
Dr. D.R.Fudani	00	00	00
Dr.S.V.Patel	04	06	10
Dr. S.M.Dave	00	05	05
Dr. J.N.Patel	01	00	01
Total Research Papers Published = 35			

Books Publication By Dr. K. P. Patel

No.	Name of Books/ Article	Publisher	Year	Remarks
1	Coordination Chemistry (Binary & ternary complexes)	Shri Avdhut Education Trust, Himmatnagar, Sabarkantha (Gujarat)	2014	ISBN 978-93-84485- 22-1 (Author)
2	Chemical bonding	K. S. Publication Bhopal	2014	ISBN 978-93-81428- 40-5 (Author)
3	Advanced Organic Chemistry	K. S. Publication Bhopal	2014	ISBN 978-93-81428- 38-2 (Author)
4	Physical Chemistry	K. S. Publication Bhopal	2014	ISBN 978-93-81428- 39-9 (Author)
5	Environment Science	Shri Avdhut Education Trust, Himmatnagar	2014	ISBN: 978-93- 84485- (Author)
6	Mission TET (Standard 6 to 8 Teacher Eligibility Test books)	Aravali Prakashan, Gandhinagar	2014	ISBN : 978-81- 921209-8-0 (Author)

Conference/seminars/workshops participated/Presented by Faculty During Last 7 Years

Sr. No.	Name of the Faculty	Seminars/Conferences/Workshops			Total	Prese nted
		Inter- national	National	State		
1	Dr. K.P.Patel	01	14	09	24	11
2	Dr. D.G.Acharya	00	06	04	08	03
3	Dr.M.P.Gongiwala	00	04	04	08	01
4	Dr. D.R.Fudani	01	06	10	17	02
5	Dr.S.V.Patel	02	08	15	25	11
6	Dr. S.M.Dave	01	03	06	10	03
7	Dr. J .N . Patel	02	08	07	14	02
	Total	07	49	54	116	33

Awards/Recognitions received by Dr. K. P. Patel

Award/Recognition

Awarded by Rashtriya Vidya Saraswati Puraskar, New Delhi for outstanding achievements in education

Peer Team Member on Academic Administrative Audit panel appointed by Commissionate Higher Education, Gandhinagar, Gujarat in 2011

Membership / Editorial Board

Senate Member, Gujarat University, Since two Terms

Convener, Soil Analysis Project, Govt. of Gujarat

Editorial Boards Members, Vibhavna Journal

Convener, Baba Saheb Ambedkar Open Uni. Ahmedabad since 2007

District Co-ordinator, Various initiatives by Commissionate Higher Education, Gandhinagar, Gujarat, Since 2010

Nodal Officer, SPIPA (Sardar Patel IAS Training Center) run by Govt. of Guj., Gandhinagar, From: 2016

Nodal Officer, Lunawada College, UGC Committee

Member of Board of Studies in chemistry Subject, Guj. Uni. From 2015-2018

Recognised ph.D. Guide in chemistry Subject, Guj. Uni. From June 2014

Details of Expert Lectures in other Institute / College by Dr. K.P. Patel

Dr. K. P. Patel

- Delivered a lectures in institute for Social Action & Research (ISAR) on:
 - Green house effect. Nano Technology. Ozone Splitting
- Attended District Science Fairs as a Chief Guest in various Institutes and delivered a lecture on an importance of Research in Science.
- Delivered lectures at local educational institutes as a chief guest and motivates the local and surroundings institutional students for research work, environmental awareness and energy conservation.
- Delivered a Lecture in the programme Journey of Academic endeavor at Sandhan, Knowledge Consortium of Gujarat (An Initiative of the Govt. of Gujarat)

Details of Expert Lectures in other Institute / College by Dr. S . V . Patel

SR. NO	DATE	NAME OF INSTITUTE	TOPIC	NO. OF BENEFICIARIES
1	16-10-2010	Science College Pilvai	Thermodynamics	45 PG Students
2	27-12-2011	Live Television Lecture Series by Govt. of Gujarat (BISAG)	Chemical Kinetics	All Science colleges of Gujarat State
3	06-01-2011	Science College Himatnagar	Chemical Dynamics	50 PG Students
4	18-09-2012	Science College Pilvai	Thermodynamics	45 PG Students
5	14-08-2013	Science College Pilvai	Thermodynamics	42 PG Students
6	15-02-2016	Science College Himatnagar	Chemical Dynamics	45 PG Students

Details of Expert Lectures in other Institute / College by Dr. D. R. Fudani

SR. NO	DATE	NAME OF INSTITUTE	TOPIC	NO. OF BENEFICIARIES
1	16-10-2010	Science College Pilvai	CMR Spectroscopy	All PG Students
3	06-01-2011	Science College Himatnagar	Pericyclic Reactions	25 PG Students
4	18-09-2012	Science College Himatnagar	Pericyclic Reactions	25 PG Students

Details of Life membership of faculties in various Organization of Chemistry

Name of Faculty	Name of Organization	Life Fellow Number
Dr. D. G. Acharya	Life member of Indian Council of Chemists, Agra.	-----
Dr. M. P. Gongiwala	Life member of Indian Council of Chemists, Agra.	LF/ 967
Dr.S.V.Patel	Life member of Indian Council of Chemists, Agra. Life fellow of the Indian Chemical Society , Kolkata.	LF/ 1701 F/7771(LM)

Details of Ph.D. Students working Under Dr. S . V . Patel

Sr. No.	Name of Students	Title	Registration No & Date	Year of Award
1	PRADIP S. DAVE	PHYSICO CHEMICAL PROPERTIES OF SOME THERMOSETS AND THEIR APPLICATION AS WATER POLLUTANT ADSORBANTS.	2208/ 24/11/2014	PURSUING
2	NILAM C. BORICHA	BIOLOGICAL EVALUATION CHARACTERIZATION OF DICOUMAROL CU(II) COMPLEXES BASED ON LEVOFLOXACIN.	2209/ 24/11/2014	PURSUING
3	AJAY K. SOLANKI	SYNTHESIS AND STUDY OF SOME NOVEL HETEROCYCLES HAVING CHELATING GROUP.	2210/ 24/11/2014	PURSUING

Toppers of B.Sc. & M.Sc. Final

No.	Year	Class	Name of Students
1	2011-12	B.Sc. M.Sc.	Gayatri G. Sharma Jaimesj M. Soni
2	2012-13	B.Sc. M.Sc.	Sirajali Y. Kardiya Inamhussain A. Lodha
3	2013-14	B.Sc. M.Sc.	Helli H. Chaudhary Ankita R. Patel
4	2014-14	B.Sc. M.Sc.	Twinkle N. Patel Bhavika J. Patel
5	2015-16	B.Sc. M.Sc.	Niki N. Pokar Dilip L. Chauhan
6	2016-17	B.Sc. M.Sc.	Komal N. Purohit Helli H. Chaudhary

Proud of Our Chemistry Department

No.	Name of the Students	Present position
1	Dr. Sanjay Parmar	Associate Professor Gujarat College, Ahmedabad
2	Dr. Ameer B. Patel	Assistant Professor Sc. College, Idar.
3	Jaimesh M. Soni	Production Manager Intas Ltd. Ahmedabad
4	Pinkesh Patel	Education Inspector Ahmedabad Rural
5	Pavan Patel	Food Inspector
6	Pradip Rathod	Q.C. Department Reliance Industries, Jamnagar

Sir P. T. Science College, Modasa.

Managed By : M. L. Gandhi Higher Education Society



Jointly Organised
by
Govt. Of Gujarat



SOIL HEALTH PROGRAMME-2010

Soil Testing

Sir P. T. Science College, Modasa.

Managed By : M. L. Gandhi Higher Education Society



Jointly Organised
by
Govt. Of Gujarat



SOIL HEALTH PROGRAMME-2010

Soil Testing

Total sample received for project : 14936

Total amount received : Rs. 1194930/-

Total Involve staff members : 20

Staff got total remuneration from this Project : Rs. 381844/-

Total Involve students : 18

Students got total remuneration from this Project : Rs. 298720/-

Key Members of our staff in soil Health Project

Principal: Dr. K.S.Pandya

Co-coordinator: Dr. D.R.Fudani.

Student team leader: 1. Prof. D.G.Acharya

2. Dr. S.V.Patel

3. Dr. M.P.Gongiwala

4. Dr. S.M.Dave

Account/Cashier: Shri M.G.Gandhi

Clerk/Computer operator: Shri N.A.Patel

Lab Asst./Store keeper:1. Shri M.P.Gandhi

2. Shri K.B.Shah

3. Shri B.S.Patel

Peon: 1.Shri V.K.Paramar

2. Shri Himanshu Sagar

3. Shri Ashok Pandya

Sample of certificate given to all students working in this Project



UGC
Sponsored
State level
One day
Seminar
Organized
by
Chemistry
Department



The poster is divided into three horizontal sections. The top section is white with a green border and contains the college's 50th anniversary logo (1960-2010) and a small emblem. The middle section is green with a white border and features a background image of laboratory glassware. The bottom section is white with a green border and contains the event details and a photograph of the college building.

**SIR P. T. SCIENCE COLLEGE,
MODASA**
Managed by
Shree M.L.Gandhi Higher education Society, Modasa.
(Accredited B+ by NAAC)
Organize

**One Day
State Level Seminar
On
Green Chemistry**
Green Chemistry = Clean Chemistry + Eco-friendly Chemistry
Save Our Earth
(Sponsored by U.G.C.)

Date : 17th December - 2011 (Saturday)
: VENUE :
Sir P.T. Science College
Chemistry Department
Dhansura Road, Modasa, Dist. S.K. Pin - 383315
E-mail : sirptscience127@gmail.com



Details of Green Chemistry Seminar : Participation :

NO.of Total Participant : 218

No . Of Faculties : 87

No . Of Research / P G Students :131

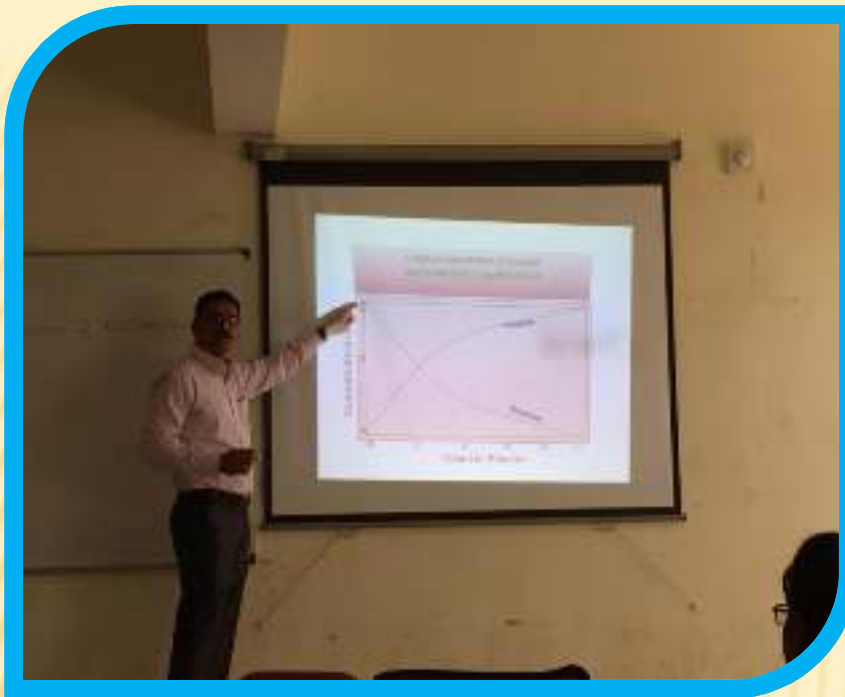
No. of Poster Presented : 26

**Invited Talk – I : Prof. (Dr) N.C.Desai,
Head Department of Chemistry
Bhavnagar University**

**Invited Talk – II : Prof. (Dr) C. P. Bhasin ,
Department of Chemistry, HNGUni,Patan.**

Photo Gallery : Green Chem. Seminar





**Expert Lectures in Science
College, Himatnagar on
15th february 2016
College
by Dr. S . V . Patel**

**Presented paper in XXVIII
Gujarat Science Congress
at Science city ,
Ahmedabad, on 22nd
February 2014
by Dr. S . V . Patel**



Industrial tour Organized by Department

No.	Year	Visiting Place	Date of Visit	No. of Student
1	2009-10	RPG Life Science , Ankleshwar	09/01/2010	53
2	2011-12	Sun Pharma, Baroda	03/02/2012	55
3	2013-14	Mc fill India Pvt. Ltd , Ahmadabad	27/12/2014	83
4	2014-15	Prayosha Health care Pvt. Ltd, Ankleshwar	23/01/2015	45
5	2015-16	Jackson Chemical and Tulip Silks mill Pvt. Ltd, Ankleshwar	28/01/2016	39



Industrial tour Photo gallery





Industrial tour Photo gallery



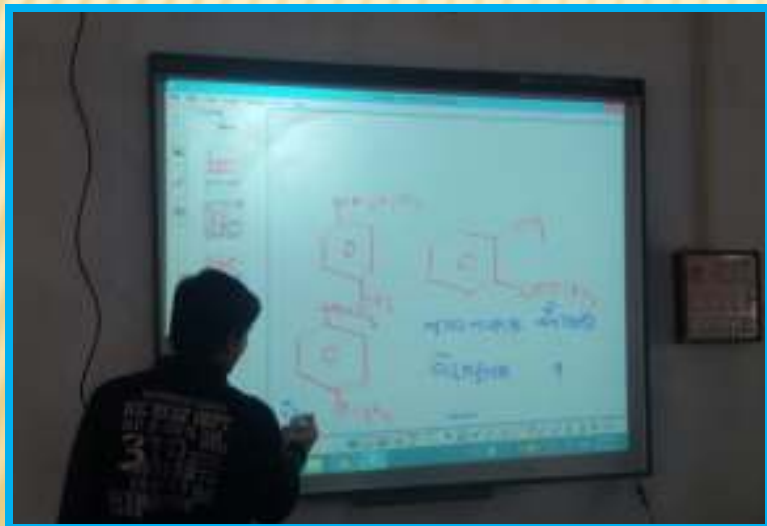
Departmental Activities

- Participation in Seminars & Conferences
- Water Analysis Project (Students)
- Classroom Seminars
- Assignment Work
- Guest Lectures
- Educational Tour
- PowerPoint & Poster Competition

Photo Gallery



Video Lecture (Sandhan)



Lecture on Smart Board

Dr. Kalpesh C Parikh , Principal, Sheth M. N. science College, Patan Delivering his Lecture on " yes and We can together make a change by selecting science as a future carrier"



Cocarriculum Activities by Faculty

Dr. D. G. Acharya : Convener of NAAC Committee

Co-ordinator of B.Sc. Sem –V

Co-ordinator of Women Cell/Girls Welfar

Dr. M.P.Gongiwala: Member of Admission committee

Member of SC/ST/OBC Cell

DR.D.R.Fudani :

Co-ordinator of IQAC

Co-ordinator of B.Sc. sem –III

Co-ordinator of SRC Committee

Co-ordinator of Arts Circle/Caltural committee

Member of Ghymkhana/Sports committee

Dr. S.V.Patel : **Coordinator of Science Circle Committee**
Coordinator of Minutes Record Committee
Member of Academic Activity Commiittee
Member of Ghymkhana/Sports committee

Dr. S.M.Dave : **Coordinator of Library Committee**
Member of Publication/Wall paper Committee
Member of Minutes Record Committee

Dr. J.N.Patel : **Coordinator of SCOPE**
Member of Women Cell/Girls Wel-fare
Member of Arts Circle/Caltural committee

Highlights of the department

- **One of our faculties, Dr. S.V. Patel is a Research Guide.**
- **Highly qualified faculties (Ph.D. Holders).**
- **Provides information to the students on how to be prepared for competitive examinations like NET, SLET, GET, etc.**
- **Many students from our department are on higher posts in industries and some of them are industrialists.**
- **Faculties are associated with various activities and academic bodies.**
- **Higher results in compare to university results.**
- **Running UG and PG Programmes.**
- **Separate Primary Research Laboratory.**

Opportunities

- ❑ To make collaboration with other institutes and industries.
- ❑ To arrange more campus interviews for UG and PG students so that students can get their jobs easily before the completion of graduation.
- ❑ To enhance the interdisciplinary approach among faculty.
- ❑ To arrange state and national level seminars/workshops so that students would be familiar about what's going in the world.
- ❑ To arrange more lectures by various science-subject experts from outside the department and educational tour for the students to grow their knowledge.

Future Plans

- To increase consultancy.
- To arrange more campus interviews.
- To subscribes more Research Journals and e-Journals.
- To develop Research Lab by adding more instruments.
- To do minor/major research projects by faculties.

Thank You