

**ANNUAL PROGRESS REPORT (2018-19) OF DBT-STAR COLLEGE SCHEME**

**Annexure I**

1. **Name of the College** : Tuljaram Chaturchand College  
of Arts, Science and Commerce, Baramati
2. **Status (Govt./ Govt. Aided/ Autonomous/Pvt)** : **Autonomous**
3. **Women's College or Co-educational** : Co-educational
4. **Urban/Rural** : Rural
5. **No. of departments supported** : 04
6. **NAAC Ranking + Year** :A+ (CGPA-3.55), 2015
7. **Details of extramural funding received in the last 5 years (UGC, DBT, DST; duration, period and amount) :**

**Funding Received for the period 2014-15 to 2018-19**

Sr. No.	Agency	2014-15	2015-16	2016-17	2017-18	2018-19	Total
1	<b>DBT</b>						
	DBT Star	-	20,00,000	9,00,000	-	16,28,772/-	45,28772
	DBT (Prof.S.T. Pawar)	-	3,34,966		-		3,34,966
2	DST – FIST	39,50,000	-	17,80,980			5730980
	DST-SERB	3,00,000	6,00,000		10,80000/ -	24,58,870/-	
3	<b>UGC</b>						
	G.D.A.	4,80,000			8 37440/-	2,99,096	1616536
	IQAC	3,00,000	-	-	-	-	300000
	MRP (Prof.N.K.Dhane)	2,90,000					2,90,000
	Substitute Teacher	14,45,024	54,81,565				6926589
	C.O.C.	21,59,550					21,59,550

B.Voc.	65,00,000	-	18,70,820	-	1,38,54,669/-	2,22,25489
CPE	-		1,02,00,000		12,00000/-	1,14,00000/-
MRP (Prof.S.T.Pawar)	-		4,26,007			4,26,007
<b>TOTAL</b>						<b>5,59,38,889/-</b>

### QUANTITATIVE

**(Data to be provided in the figures as well as bar graphs, before and after the Star College Scheme was implemented in the college)**

**8. No. of applicants vs. No. of seats in each department:**

		Microbiology	Botany	Zoology	Physics
F. Y. B. Sc.	No. of Applicants	375	407	407	237
	No. of Seats (Admission)	187	185	185	199
S. Y. B. Sc.	No. of Applicants	113	154	154	156
	No. of Seats (Admission)	113	154	154	133
T. Y. B. Sc.	No. of Applicants	40	13	41	60
	No. of Seats (Admission)	26	13	41	42

**9. Number of students admitted year wise in different courses supported under the Star College Scheme:**

Class	Number of students admitted			
	Microbiology	Botany	Zoology	Physics
F. Y. B. Sc.	14	30	30	43
S. Y. B. Sc.	42	15	25	27
T. Y. B. Sc.	26	13	25	17

**10. Change in the cut off percentage/admission:**

<b>Cut of</b>	<b>15-16 (Before)</b>	<b>18-19 ( After )</b>
<b><u>UG (First Year)</u></b>	<b>45</b>	<b>52</b>
<b>PG</b>	<b>Max -96 Minimum- 57</b>	<b>Max -98 Minimum- 63</b>

**11. Change in the dropout rate:**

<b>Dropout</b>	<b>15-16 (before)</b>	<b>18-19</b>
<b><u>UG</u></b>	<b>2.87</b>	<b>1.13</b>
<b>PG</b>	<b>2.18</b>	<b>1.1</b>

**12. Data on pass percentage (UG level):**

<b>pass percentage</b>	<b>Total App.</b>	<b>No. of pass Student</b>	<b>No. of Fail</b>	<b>% of Passing</b>
<b><u>Botany</u></b>	<b>22</b>	<b>20</b>	<b>02</b>	<b>90.00</b>
<b>Zoology</b>	<b>41</b>	<b>31</b>	<b>10</b>	<b>75.60</b>
<b>Microbiology</b>	<b>36</b>	<b>32</b>	<b>04</b>	<b>88.88</b>
<b><u>Physics</u></b>	<b>46</b>	<b>36</b>	<b>10</b>	<b>78.26</b>

**13. Data on how many students opted for PG courses : Science Departments : 638**

**14. List of additional practical's introduced**

**Microbiology :**

1. Good laboratory Practices.
2. Wrapping of Glasswares and Plugging of Flasks and Tubes.
3. Adjustment of pH meter using pH meter.

4. Handling of Micropipetts.
5. Preparation of Slants and Butts.
6. Preparation of Molar/Normal/% solution.
7. Preparation of SOP for UV Spectrophotometer.
8. Preparation of SOP for operation of Cooling Centrifuge.
9. Preparation of Manuscript using Microsoft Word and Microsoft Exel.
10. Calibration of pH meter.
11. Fumigation of Lab.
12. Handling of Laminar Air Flow.

**Botany :**

1. Preparation of bio insecticides using different plant resources
2. Vermiculture technique.
3. Use of biofertilizers in crop field.
4. Phytoremediation of saline soil.
5. Training for the use of different instruments used for extraction bioactive compounds.
6. Practical's based on nursery management preparation of beds and raising seedlings.
7. Techniques of seed scarification.
8. Seed testing for viability and vigor.
9. Practical's based on nursery management- cultivation techniques.
10. Practical's based on nursery management
11. Raising of different types of green and poly house.
12. Practical's based on lab safety in industry.
13. Tissue culture technique for conservation of endangered species.

**Zoology :**

1. Culturing of Earthworm
2. To estimate the morphometric measurements in fishes.
3. Handling of microscopes.
4. Preparation of buffer of desired pH and molarity.
5. Preparation of normal, molar and percent solution.
6. Study of heart beat in cockroach.
7. Analysis of Sugars by TLC.
8. Sectioning and staining and mounting from animal tissues.

9. Population dynamics of insects with Quadrate method.
10. Chick embryo culture on glass ring.
11. Study of fecundity in fishes.
12. Study of food adulteration.

**Physics :**

1. Young's Modulus of Metal Bar by flexural vibration method
2. Rigidity modulus of brass
3. Study and use of digital vernier, micrometer screw gauge, CRO etc.
4. Calibration of Si diode as thermometer
5. Energy band gap of semiconductor
6. Measurement of capacitance
7. Characteristics of solar cell
8. Measurement of electrical and thermal conductivity of copper
9. Study of AC bridges
10. Dielectric constant of non-polar liquid and dipole moment of organic liquid
11. B-H curve of ferromagnetic materials
12. Measurement of self inductance of coil
13. Determination of wavelength of given source

**15. List of minor projects implemented name of students and supervisor**

**Microbiology**

<b>Sr. No.</b>	<b>Name of the Project</b>	<b>Name of Students</b>	<b>Name of Guide</b>
1.	Isolation and Characterization of exopolysaccharide producing Organism from natural Sources	Jadhav Tejeswini Madhukar Chavan Rajani Suresh Bagade Jayvardhan Subhash More Pravin Ankush Dagade Abhijit Jagannath	Dr. S. T. Pawar and Mr.A.A Kalumbe
2.	Population and Diversity of Bacteria From Mobile phone screens	.Khomane Mangesh Lahu. Shirsat Rupali Vilas Kharade Shweta Devidas	Dr. M. H. Gajbhiye
3.	Antimicrobial Activity of newly Synthesized Compounds	Gawade Pooja Narayan Deokate Nikita Tatyasaheb Sonawane Kalyani Anil	Mrs Y. R. Mulay
4.	Isolation of Pathogens from infected plant part	Pawar Mayur Abaso Bhosale	Mr.D. V. Doshi Miss. S.P. Owl

		Balbhim Pandurang Bhosale Aditi Vinay Jarad Deepa Appaso Shinde Sayali Madhukar	
5.	Synthesis and Characterization of Copper nanoparticle	Bhandalkar Nisha Kalyan Shende Monali Dhanaji Jagtap Komal Dnyandev Shinde Shubham Arjun Gore Mahesh	Mrs. K. R. Jagtap Mrs. P.C.Bhosale
6.	MPN of Water Sample	Ghadge Akshay Bhagwan Rahudkar Kajal Bharat.Khaire Omkar Vijayrao Rasal Priyanka Raju .Nale Pranali Bapurao	Mrs .S.R. Shaikh Miss S.S shah

**Botany :**

<b>Sr. No.</b>	<b>Name of the Project</b>	<b>Name of Students</b>	<b>Name of Guide</b>
1.	Survey and collection of seasonal plants from different areas	More Arti Hiranman	Dr. (Mrs.) R. D. Chitale
2.	Phytoremediation of saline soil by using salt tolerant plant species	Solankar Reshma Tukaram Shaikh Kausar Sajjan	Dr. B. S. Mali
3.	Estimation of bioactive compounds from different plant sources	Kapse Prajakta Sanjay More Dnyaneshwar Shankar	Dr. (Mrs.) M. P. Patil
4.	Effect of vehicular pollution on growth and development of roadside plants	Shinde Shraddha Rajendra Jamdade Rani Mohan	Dr. A. B. Telave
5.	Isolation, Identification and characterization fungi from crop field	Andhale Shivam Rajesh Andhale Shivani Rajesh	Dr. M. B. Kanade
6.	Antimicrobial assessment of bryophytes from ghat regions	Wayase Akshay Jalindar Shaikh Afareen Yunus	Dr. S. J. Chavan

7.	Ecophysiological studies on weeds from arid region	Shaik Parvej Ibrahim Shaikh Kausar Sajjan	Dr. (Mrs.) M. P. Patil
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### Zoology :

Sr. No.	Name of the Project	Name of Students	Name of Guide
1.	Population dynamics of Earthworm in relation to Physico-chemical parameters from Daund tahsil, Pune (MS)	Ms. Mhetre Shrutika Ravindra Ms. Khomane ashvini shankar Ms. Bharti Chetna Mahendra Ms. Dombe Dhanashree	Dr. V.B.Nale
2.	Study of Spider diversity from Baramati tahsil.	Mr. Shinde Sayali Ramesh Ms. Bartakke Karuna Sanjay Ms. Gawade Dnyaneshwari Ms. Bhosale Bhagyashri Sunil	Mrs..S.S.Doshi
3.	Study of Mollusc diversity from Baramati tehsil	Ms. More Dipali Abaji Ms. Bhute Vaishnavi Nilesh Ms. Bharti Chetna Mahendra	Dr. R.G.Kudale

### Physics :

Sr no	Name of the project	Name of the students	Name of guide
1.	Study of efficiency of a 30 MW coal fueled thermal power plant attached with paper mill	Rati Niranjana Bhowmik	Dr. R.D. Kale
2.	Synthesis and characterization of ZnO thin film by chemical bath deposition method	Yuvraj Dattatray Gaikwad	Dr. P.C. Pingale
3.	Synthesis and characterization of NiS thin film by Silar method	Swati Manikrao Kulkarni	Dr. R.D. Kale
4.	Synthesis and characterization of PbS thin film by chemical bath deposition method	Shital Ashok Wanave	Dr. P.C. Pingale Miss. J.V.Waghmode
5.	Laser based intruder alarm	Geetanjali Mahadeo Vharkute	Dr. A.E. Kalange
6.	Earth leakage tester	Shrinath Dilip Shinde	Dr.M.K.Kokare
7.	Cell phone detector	Pooja Somnath Takawane	Dr. A.E. Kalange
8.	Synthesis and characterization of cobalt thin film by electrodeposition method	Sumit Vishawanath Chavan	Dr. P.C. Pingale
9.	IR based security alarm	Sabiya Shoukat Sayyad	Dr. A.E. Kalange

10.	Wireless water level indicator	Shubham Laxman Varudkar	Dr. A.E. Kalange
11.	Synthesis and characterization of ZnO Nano particle	Pooja Abasaheb Suryavanshi	Dr. R.D. Kale
12.	Noise meter	Ganesh Rajendra Gaikwad	Dr. A.E. Kalange
13.	Temperature detector using AD590	Yogita Shankarrao zargad	Dr. A.E. Kalange
14.	Visualization of crystal structure by using computational graphics	Guari Balu Kale	Dr. S. B. Kulkarni Dr. P.C. Pingale
15.	Characterization of nanostructured photoconductive NiS thin film grown by novel deposition by silar method	Anuradha Adhikrao Rupanavar	Dr. S. B. Kulkarni
16.	Hydrothermal Synthesis of Vanadium doped Zno Nanoparticles	Nisha Santosh Mohite	Dr. R.T. Sapkal
17.	7Segment Counter using IC 555& IC4026	Jyoti Annaso Rupnwar	Dr. A.E. Kalange
18.	Single Fuse Autosystem	Tushar Balaso Parkale	Dr. P.C. Pingale
19.	Water pump Dry Run Guard	Kiran Sanjay Mergal	Dr.M.K.Kokare
20.	LM35 Temprature Sensor Using Aurdino	Pinki Omkar Pandey	Dr. P.C. Pingale
21.	Smart Hearing Aid	Bhagyashree Rajendra Londhe	Dr. A.E. Kalange
22.	Estimation of the Circumference of the earth Eratosthenis Method	Prathmesh Anil Chavan	Dr.M.K.Kokare
23.	IR Based Light Control	Ranju Swaminath Chauhan	Dr. A.E. Kalange
24.	Study Of Performance Of Solar Panel	Tushar Rajendra Dhaygude	Dr.M.K.Kokare
25.	Comparative Study Of Radioactive Source By Using G.M. Source	Shubhangi Phulchand Dhore	Dr.M.K.Kokare
26.	Stress Meter	Amruta Haribhau Gandhale	Dr. A.E. Kalange
27.	Hybrid Solar Charger	Rutuja Appasaheb Gaund	Dr. A.E. Kalange
28.	Metal Detector	Sonal Dnyaneshwar Patil	Dr. A.E. Kalange
29.	Energy Audit Case Study	Abhishek Mansingrao Patil	Dr. A.E. Kalange
30.	Aquarium Probe	Dhiraj Dattatray Khalate	Dr.M.K.Kokare
31.	Synthesis of Nanocrystalline ZnCo Ferrite Powder by Solgel Autocombustion Method	Nikhil Sanjay Jadhav	Dr.M.K.Kokare
32.	Surface Tension	Vishal Balasaheb Mane	Dr. R.T. Sapkal
33.	Remote Control For Home application	Akshay Ankush Jadhav	Dr. A.E. Kalange



34.	Smoke Alarm	Sanket Arvind Hedau	Dr. A.E. Kalange
35.	IR Music Transmitter & Receiver	Aishwarya Govind Golande	Dr. A.E. Kalange
36.	Led Sunset Lamp	Niranjan Sonaji Gawade	Miss. J.V.Waghmode
37.	Synthesis & Characterization Of CdS Thin Film By CBD Method	Swapnil Balu Choudhari	Dr. P.C. Pingale
38.	Synthesis of Nanocrystalline ZnCo Ferrite Powder by Solgel Autocombustion Method	Mayuri Chandrakant Shinde	Dr M.K.Kokare
39.	Sound Operated Switch	Akshay Sambhaji Wayal	Dr. P.C. Pingale.
40.	Automatic Solar Tracking System	Pushparaj Balaso Valkunde	Dr. P.C. Pingale.
41.	Sound Analysis of Sitar	Girija Prashant Mahamuni	Dr. A.E. Kalange
42.	Pyroelectric Fire Alarm	Snehal Shivaji Pawar	Dr. A.E. Kalange

## 16. Faculty improvement activities such as training courses, seminar.

**Training course organized :**

### **Short Term Faculty Development Programme**

- 1) **Self Finance basis Short Term Faculty Development Programme** arranged at our college from **16<sup>th</sup> July 2018 to 22<sup>nd</sup> July 2018.**

**Title : “ICT as a tool in higher education.**

This programme was approved and sanctioned by UGC-HRDC, SPPU, Pune and conducted for seven days (42 contact hours). The theme of the programme was **“ICT as a tool in higher education.”** For this programme 44 applications were received and **38participants** from different disciplines attended the programme .

Considering the main theme of the programme, the topics related to ICT were mainly focused. This included topics such as Use of Apps, Social media, Power point presentation, Microsoft Word, MOOCs, MOODLE, SWAYAM, Google Doc, Google Scholar, Hacking, Use of ICT in preparation and presentation of study material, Digital evaluation, E- library, E-learning, J-gate, Internet security, Impact of ICT etc. Along with these topics, several other topics of general concern were also covered during the programme. This included Patent act, Intellectual property rights, Plagiarism, How to write research proposals, Projects and Papers, Effective classroom teaching, Evaluation methods, Use of audio visuals etc. Also some sessions were arranged for hands on training at computer laboratories for preparation of on line study material.

The participants were given the reading material and a copy of group photo in soft format on their respective E-mail. The performance of participants was evaluated on the basis of preparation of research proposals and an online test using MOODLE technology. The participation certificates received from UGC-HRDC, SPPU Pune, were given to every participant after valedictory function.

This Short Term Faculty Development programme was successfully completed with the kind cooperation of Mr. Upendra Chaudhari (Asth. Coordinator), faculty members of Computer department and support staff of Computer, Chemistry and Store departments. Mr. Sanjay R. Kale. Worked as Coordinator

**2) Short Term -Faculty Development Programme (3<sup>rd</sup> December - 9<sup>th</sup> December, 2018)**

**Title : “Mathematics for Biological Science”**

Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati in collaboration with Ministry of Human Resource Development Centre of SPPU have jointly organised Short Term Course for Biological science teachers at National level on “Mathematics for Biological Science”. Total 37 participants have completed short Term Faculty Development Programme. Speakers were from recognised institutes like IIT -Mumbai, BARC-Mumbai, SPPU-Pune etc. During this programme following areas were covered

- Usefulness of Mathematics in learning biology
- Concept of mathematical Functions like (Linear, Power and Exponential functions)
- Applications of Biostatistics etc.

This Short Term- Faculty Development Programme was Coordinated by Dr. Yogini Ramkrishana Mulay.

<b>Sr. No</b>	<b>Title of Workshop</b>	<b>Name of Speakers</b>	<b>Participants</b>	<b>Date of Workshop</b>
1	Interactive Teaching learning and human Values At Panchgani		Microbiology-02 Botany-01 Zoology-02 Physics-01 Total-06	18 and 19 Mar 2019
2	Use of ICT in Teaching and Learning	Mr.Rahul Shah	Faulty members Microbiology-13	27/08/2018
3	HPLC demonstration	Dr.Rahul	Faulty members	25/02/2017

		Bhondave	Microbiology-13	
4	FDP- Mathematics for Biological Science		Microbiology-04 Botany -04	3 to 10 Dec 2018

**Training course (Participated) :**

Sr.No	Title of Workshop	Name of Guest /Speaker	Participants	Date of Workshop
1	One day Workshop entitled "Hands on Electrophoresis "	Mr.Dhawal V Doshi	82	05/08/2018
2	Mind Training Programme for right Awareness	Shri.Mukhedkar	Faculty:25 Students :250	28/08/2019

**17. Outreach activities conducted and their impact / follow up**

Sr. No.	Class	Name of students	Name of institute	Duration
1	T.Y.B.Sc. Zoology	Ms. Rahudkar Kajal Bharat	Training in Explores & Understand DNA by BioEra Life Science PrivateLtd., Pune on 22 <sup>nd</sup> to 23 <sup>rd</sup> Aug. 2018	Two days
2	S. Y. B. Sc Botany	Miss. Ambekar Revati Miss. Prakta Khadke Miss Admute Ankita	Training programme on Mushroom Cultivation Wadia College, Pune, 9 <sup>th</sup> and 10 <sup>th</sup> January.2019	Two days

**18. Any outstanding achievement by student/faculty (merit, award, research paper, presentation in national/international conference/ etc; full citation to be provided)**

**Participation:**

Name of students	Type of event	Venue	Dates
Subham Gawade Nishita Bhosale Kajal Rahudkar Snehal Londhe	International Conference Entitled as Empowering societies with microbial Technologies	Department of Microbiology T .c College	7 to 9/02/ 019

## Presentation

Name of students	Type of event	Venue	Dates
<b>Subham Gawade</b> <b>Yogesh Yele ( Microbiology)</b>	Poster presentation in International Conference.	Department of Microbiology T .c College	7 to 9/02/ 019
<b>Mrs kokate Aswarya , Mrs Jadhav Vinaya ( Physics )</b>	Poster presentation in International Conference.	Department of Microbiology T .c College	7 to 9/02/ 019
Wayase Akshay Jalindar Shaikh Kauser Sajjan Shaikh Afareen Yunus Andhale Shivam Rajesh Andhale Shivani Rajesh (Botany)	Poster presentation in Intaglio Series competition.	Anekant Institute of Management Studies	18 <sup>th</sup> and 19 <sup>th</sup> Jan 2019.

## 19. List of Short term training courses/workshops conducted for students and faculty, including title, duration, no. of beneficiaries

Department	Title	Duration	No. of Beneficiaries
Microbiology	FTIR Demonstration	24 to 25/01/ 2019	26
	Soft Skill Programme – personality development, group discussion, self motivation, interview skill, CV writing	27 to 28/01/ 2019	82
Botany	<b>Online Life Science Talent Search</b> Exam. for U. G. Students	10/02/ 2019.	26
	Bridge course for F. Y. B. Sc	02/07/2018 to 07/07/2018	175
	<b>Induction Program on Research Methodology</b>	<b>23/07/2018</b>	35
	One Day workshop on Plant Tissue Culture Techniques	27/09/2018	80
	Certificate Course on Herbal Drugs and Cosmetics	18/12/2018 to 30/01/2019	30

Zoology	Bird Monitoring Workshop	22/12/2018	30
Physics	One week special bridge course to F. Y BSc Students	02/07/2018 to 07/07/2018	165
	PCB Design and fabrication	20/12/2018 to 23/12/2018	42

**20. Guest lectures :**

**Microbiology :**

Sr. No	Title of Guest Lectures	Name of Speakers	Participants	Date of Lectures
1	Problem Solving Approach on Preparation of Buffer solution	Dr.Deopurkar R.L	82	28/8/2018
2	Antibiotic Therapy	Dr.Elham Jaferzadeh	68	6/10/2018
3	Career Guidance	Dr.Deopurkar R.L	26	21/10/2018
4	How to do literature survey of project	Shankhar Bhujbal	82	3/12/2018
5	Statistical Approach	Saantosh Kumar	68	4/12/18
6	CRISPER technology	Dr. Joel Gaikwad	48	6/2/2019
7	Hydrocarbon Degradation	Dr Sanket Joshi	48	7/2/2019
8	Spectrum of B lactamase Antibiotic	Dr.Abdulla Soheal	48	8/02/2019
9	Actinomycetes	Dr. A.M.Deshmukh	82	9/2/2019

**Zoology :**

Sr. No	Name of Faculty	Designation	Host Institute	Duration of Visit	Topic lecture / discussion	Participants
1	Dr. Joel Gaikwad	Chairman and Professor	Biology and Chemistry Department, Oral Roberts University, USA	09/02/2019	CRISPR Technology	30
2	Dr. Nandkishor Dudhe	Scientist	BNHS, Mumbai	22.12.2018	Bird watching.	30

**Physics :**

<b>Sr. No</b>	<b>Title of Guest Lectures</b>	<b>Name of Speakers</b>	<b>Participants</b>	<b>Date of Lectures</b>
1	Experimental Techniques in Physics	Dr. Vijay Mohite	35	25/03/2019
2	Physics Experiments	Dr. R T Sapkal	125	02/03/2019
3	Energy storage Devices	Dr R D Kale	27	06/03/2019
4	NET/SET preparation	Mr. S B Kakade	23	21-22 /03/ 2019

**Botany :**

<b>Sr. No</b>	<b>Title of Guest Lecture</b>	<b>Name of Speakers</b>	<b>Participants</b>	<b>Date of Lectures</b>
1	Fungal Diversity and its Economic Importance	<b>Dr. K. R. Randive</b>	<b>80</b>	<b>18/12/2018</b>
2	Review of Literature	<b>Prin. Dr. C. V. Murumkar</b>	<b>13</b>	<b>23/07/2018</b>

**21. Visits to industries, institutes etc (name of place, duration of visit and no. of students)****Microbiology :**

<b>Name of place</b>	<b>Duration of visit</b>	<b>No. of Students</b>
Late Manikbai Chandulal Saraf Blood bank, Baramati	07/03/2019	26
Kvk Malegoan	09/02/2019	82
Nandan Dairy Malegon	21/2/2019	42

**Botany :**

<b>Name of place</b>	<b>Duration of visit</b>	<b>No. of Students</b>
Lalbag Botanical Garden, Bangalore (T. Y. B. Sc.)	03/02/2019 to 09/02/2019	13
Visit to Shivtharghal Vegetatiaon (T. Y. B. Sc.)	02/10/2018	13
Study tour at Baneshwar ( S. Y. B. Sc.)	19/01/2019	165

**Zoology**

<b>Name of place</b>	<b>Duration of visit</b>	<b>No. of Students</b>
Rajiv Gandhi National snake park, Katraj ,Pune	1.10.2018	30
Sericulture, Apiculture, Dairy Farm & Poultry at KVK, Baramati	23.08.2028	25
ZSI, Zoological Park, Science Park, Butterfly garden, Hyderabad.	27 to 30.01.2019	25

**Physics :**

<b>Name of place</b>	<b>Duration of visit</b>	<b>No. of Students</b>
Science Park at Pimpri-Chinchwad, Dist Pune	12/02/2019	85

**22. List of lab manuals / SOPs generated for all participating departments**

**Microbiology :**

- Spectrophotometer
- Colorimeter
- pH meter
- Autoclave
- Laminar air flow cabinet
- Cooling centrifuge
- ELISA Reader

**Botany :**

- Flame photometer
- UV- Vis spectrophotometer
- Rotary shaker
- Microphotography
- BOD incubator
- Laminar Air Flow cabinet
- Transilluminator
- Cooling Centrifuge

**Zoology :**

- Spectrophotometer

- Colorimeter
- pH meter
- Autoclave
- Laminar air flow cabinet
- BOD incubator

**Physics :**

- Vacuum Evaporation and Electron beam Evaporation
- Spray Pyrolysis System
- Synthesis of Nano Particles
- Chemical Bath Deposition
- Electrochemical synthesis of Materials

**23 Feedback mechanism adopted (to be indicated in term of how the quality of teaching and hands on training improved)**

The college has a feedback mechanism for receiving and analyzing the student feedback on the various activities organized in the college. We have designed a feedback mechanism for the different activities conducted under STAR College scheme. The feedback is collected on specially designed form / students remarks on the register.

**24. Any special innovative approach adopted by the college in improving the UG education**

- Pre admission counseling
- Induction program
- Preliminary and term end examinations
- Soft skill program at entry and exit level
- Use of ICT for teaching
- Organization of guest lectures
- Use of ICT in teaching learning process.
- Animal films shown to the students
- Preparation of PPT's for teaching
- Use of Models
- Use of charts



**25. A summary on “how the Scheme helped in strengthening of the UG education and what would not have been possible without this” (not more than 1000 characters)**

The program helps to strengthen the laboratory and infrastructural facilities for the students. Hands on exposure to the various experiments improve the practical skills of the students. The scheme provides an opportunity to undertake project at S.Y. and T. Y. B. Sc. Level. Students learn how to design experiments, learn how to do referencing , research methodology and scientific writing from the minor research projects. The communication and soft skill program improve the skills among the students. Also, the exposure through guest lecturers provides an opportunity to interact with the experts/ eminent scientist in the field.

Overall the scheme has played a significant role in thorough understanding of the subject and development of the students. DBT-STAR college scheme made us to achieve NAAC A+ Grade (CGPA 3.55) for 3<sup>rd</sup> cycle of NAAC accreditation. NAAC peer team interacted with students under STAR college scheme it was found that these students were more confident. The chairman of peer team was happy for their performance. This scheme has played significant role in getting Autonomous status to the institution by UGC New Delhi.

**26. Suggestions/feedback for improving the scheme**

STAR college scheme is very good for the UG students for improving their overall skills in terms of their hands on experiments, communication skill and increasing their vision due to visit conducted to industry and research institutions.

We have following suggestions for improving the scheme.

1. We would be happy to know clear guidelines regarding the expenditure under the head “recurring grant” especially remunerations for resource persons.
2. If DBT identifies the names of scientist from different research institutes, it will be easier for us to place the students for summer training.

**27. DBT STAR College advisory committee.**

**DBT Representative**

1. Dr. C. V. Murumkar – Principal, Tuljaram Chaturchand College, Baramati
2. Dr. Suman Govil – Advisor HRD, New Delhi
3. Dr. Garima Gupta – Scientist D, Nodal Officer for STAR College Scheme, Department of Biotechnology, Government of India, New Delhi.

### **External Experts**

4. Dr. K. K. Krushnani - Head School of Ediapetic Stress Management, National Institute of Abiotic Stress Management (NIASM), Baramati
5. Dr. K. C. Ahire - Dept. of Zoology, Savitribai Phule Pune University, Pune

### **Coordinator & Member Secretary**

6. Dr. S. J. Sathe - Coordinator

### **Coordinator & Member Secretary**

7. Mrs. Y. R. Mulay - Coordinator for Microbiology Dept.
8. Dr. A. B. Telave - Coordinator for Botany Dept.
9. Dr. V. B. Nale - Coordinator for Zoology Dept.
10. Dr. R. T. Sapkal - Coordinator for Physics Dept.

## COORDINATORS DETAILS



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## COLLEGE LOGO

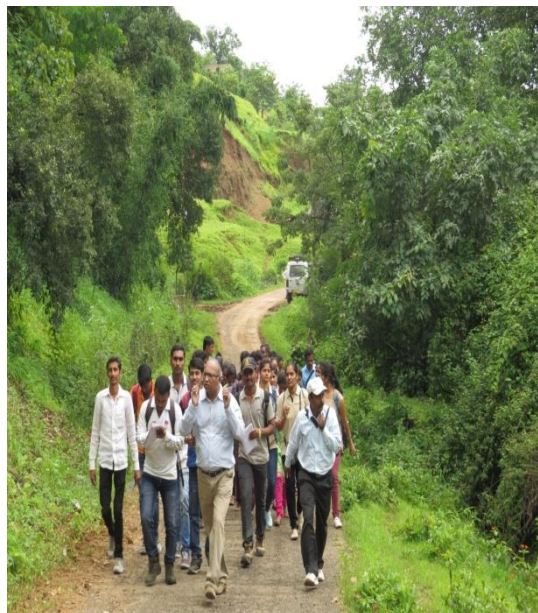


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Events in Botany Department : Star College activity: 2018-19



Induction Programme on Research Methodology



Botanical Excursion at Shivtharghal



Bonsai workshop



Life science Talent Search Online Exam  
Arrangement Competition



Study Tours : Kunnur( T. Y. B. Sc.Botany)  
Baneshwar

IQAC Festival : Flower



Study Tour: S. Y. B. Sc Botany









