

## P D Patel Institute of Applied Sciences (2015-2016)

### Curriculum feedback analysis and action taken report

Sr. No.	Stakeholder	Feedback	Action Taken
1	Industry experts	No Comments	NA
2	Employers	No Comments	NA
3	Academic Peers	Students should be trained for academic speaking	Students were trained by encouraging them for giving scientific seminars where they were mentored by faculties for the same for all BSc students (sample certificate copy attached- Annexure 1) To train students for academic speaking, for dissertation presentation pattern was decided and followed (minutes of departmental meeting attached – Annexure 2).
4	CHARUSAT teachers	Student practical skills should be improves	To improve practical skills more instrument were procured and laboratories were established. Mini project was offered to BSc semester V students. (Departmental minutes - Annexure 3, list of students with mentor details and one sample copy of certificate attached – Annexure 4)
5	Alumni	Industry oriented subjects should be added	Changes were initiated and subjects like Analytical techniques in Biology, General virology etc were offered as core courses (teaching scheme 2017-18 attached –Annexure 5)
6	Parents	Improve the food quality within the campus	Appropriate authorities have been advised for the required changes
7	Present students	More expert lectures should be arranged along with science tours for students	Industrial tour at Bills Biotech Pvt Ltd park and Savli Biotech Incubator on 9/11/2017 (Report attached – Annexure 6 )

		students	Incubator on 9/11/2017 (Report attached)
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*Ram Lal*





**CHARUSAT**  
CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY



## CERTIFICATE OF PARTICIPATION

This is to certify that KAGDI ZAYNAB with Enrollment No. 14BSC017, a student of B.Sc. Semester VI, has enthusiastically participated in Value Added Course “Scientific Seminars” (of more than 30 contact hours) offered by the Department of Biological Sciences, PD Patel Institute of Applied Sciences (PDPIAS), Charotar University of Science & Technology (CHARUSAT), Changra, Gujarat during the academic year 2016-17.

**Dr. Aditi Buch**  
Course Incharge  
Department of Biological Sciences,  
PDPIAS, CHARUSAT

**Dr. Janki N. Thakkar**  
Head of the Department,  
Department of Biological Sciences,  
PDPIAS, CHARUSAT

Annexure 2

**PDPIAS, CHARUSAT**

**Minutes of the Meeting (Department of Biological Sciences)**

**Date: 13<sup>th</sup> February, 2016**

**Venue: Staffroom (No. 201)**

Dr. Bragdish Iyer

Dr. Darshan Patel

Dr. Seema Amin

Dr. Gayatri Dave

Dr. Aditi Buch

Dr. Janki N Thakker

Dr. Palash Mandal

Dr. Chirayu Desai

Dr. Jagdish Patel

Dr. Hilor Pathak

Agenda for meeting

Departmental purchase committee meeting for instruments below one lakh

1. Stereo Microscope (1): All the faculties recommended to purchase the stereo microscope of Carl Zeiss. It is for B.Sc. and M.sc. Students. The selected Carl Zeiss Microscope is providing the good zooming option i.e 5:1 as well as superior quality images compared to other quoted microscopes.
2. Microscopes (20): All the faculties have recommended the purchase of MLM quoted by shakti Scientific (The lowest quote was offered by Kheteshwar trade link but it is without light source. We asked for the Prize for the GL1 substage but he did not gave the quotation or reply). So all the faculties suggested to purchase the microscopes from shakti scientific

**PDPIAS, CHARUSAT**  
**Minutes of the Meeting (Department of Biological Sciences)**  
**Date: 5<sup>th</sup> March, 2016**  
**Venue: Staffroom (No. 201)**

Dr. Bragdish Iyer	Dr. Jagdish Patel
Dr. Darshan Patel	Dr. Palash Mandal
Dr. Seema Amin	Dr. Chirayu Desai
Dr. Gayatri Dave	Dr. Jagdish Patel
Dr. Aditi Buch	Dr. Hilor Pathak
Dr. Janki N Thakker	

**Agenda for meeting**

1. Dissertation internal presentation and External Presentation
2. External practical exam
3. Instrument maintenance
4. Subject distribution for next semester
5. Requirements for next semester

Faculty members decided and agreed for

**1. Dissertation internal presentation-**

Date of internal presentation – 25<sup>th</sup> March, 2016

Time- 0.9.30 A.M. onward

Duration – 15 minutes (10 minutes presentation and 5 minutes defense)

It was decided that questions will be asked only after student completes the presentation

### **Distribution of Marks for research project proposal- 50 Marks**

- a) **Style of presentation** (20 Marks)- it will include introduction, hypothesis, materials and methods or workflow, results, confidence, slide preparation which will include spacing etc (all faculties will give marks including guide)
- b) **Content (10 Marks)** – work progress, efforts, regularity, sincerity, dedication (Guide will give marks) Highest marks should not be more than 8 and lowest not less than 5
- c) **Defense (20 Marks)** - understanding and defense (all faculties will give marks including guide)

### **2. External and internal practical exam for M.Sc.**

Date for external practical exam will be from 27<sup>th</sup> April to 29<sup>th</sup> April and all faculties taking subjects will give practical performance. Dr. Subramanian or Dr. Devesh Suthar will come for semester II practical exam of BT and for Microbiology Dr. Ujjaval Trivedi will come for practical exam.

Internal practical exam will be from 21<sup>st</sup> to 23<sup>rd</sup> April, 2016. Last date for Journal certification is 14<sup>th</sup> April, 2016

**3. Subject distribution-** Dr. Seema Amin opened her subject of Agriculture microbiology. Other subject distribution will be decided after discussion with Principal Sir

### **4. Instrument Maintenance**

Dr. Seema Amin informed about progress of maintenance of instrument like shakers, incubators etc. Dr. Janki informed about the AMC approval for Biorad and the new Dongle for Biorad will be available with Dr. Bragadish Iyer and students should issue the Dongle from Dr. Iyer.

Dr. Seema Amin informed all the faculties that AMC of UV spectrophotometer is done and in case of any problem we can contact Hetal Bhai

**5. Requirements for next semester-** Date of Requirement submission for next semester will be decided after discussing about the subject distribution with Principal Sir

**6. Admission activity:** As part of Admission activity Dr. Janki and Dr. Dashan informed about the planning of training for B.Sc. students (Discussion for training was done earlier with Principal Sir). In next faculty meeting training duration, faculty involved and other details will be discussed.

Announce 3

PDPIAS, CHARUSAT

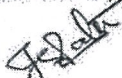
Minutes of the Meeting (Department of Biological Sciences)


Date: 17/12/2015


Venue: Staff Room (No. 201)


The meeting of Staff members of Department of Biological Sciences was held on 17<sup>th</sup> December, 2015 at Room no. 201 from 2.00 p.m. onwards.


Following members were present in the meeting.


Dr. Jagdish Patel 


Dr. Bragdish Iyer 

Dr. Seema Amin 

Dr. Gayatri Dave 


Dr. Aditi Buch 

Dr. Neeraj Jain 

Dr. Hilor Pathak 

Dr. Darshan Patel 

Dr. Chirayu Desai 

Dr. Janki N Thakker 

Agenda for meeting – Discussion regarding instruments required for Biological sciences (M.Sc. + B.Sc.)

Following instruments were finalized after discussion with all Biological sciences faculties. Details attached

## INSTRUMENTS REQUIRED FOR B.Sc.

No.	Name	Justification	Quantity
1.	Stereo Microscope	Required for experiments in Genetics for the courses BS 206, BT 401, MS 706	03
2.	Agarose Gel electrophoresis Unit with Power Pack	Required for experiments of BS 203 & BS 202	06
3.	UV Cabinet	Required for the experiments of BT 401, MI 401, MS 706 & BS 206	01
4.	UV-Hand Held Lamp	Required for the experiments of BT 401, MI 401, MS 706 & BS 206	05
5.	Polarimeter	Required for chemistry practicals of B.Sc.	01
6.	Microtome	Required for preparation of specimens in B.Sc	01
7.	BOD Incubator (Above 1 Ltr)	For cultivation of microbes.	01
8.	Incubator	"	01
9.	UV-transilluminator	Required for experiments of BS 402, BS 403, BS 502	02
10.	Micropipette	Required for all courses	08 set.




12. Autoclave


13


Light compound microscope


Required for BS


Neeraj Jeeva 

BS 205, BS 206,  
BS 201

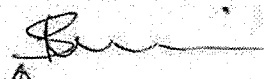
Dr. Anjali Dore 

Dr. Jagdish Patel 

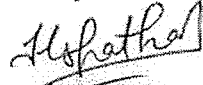
Dr. Jagdish Patel 

Dr. Janki Thakkar 

Dr. Brajesh Iyer 

Dr. Seema Anil 

Chiranjeev Dore 

Hitor Pathak 

Aditi Bhat 

# INSTRUMENTS FOR M.Sc. (REQUIREMENTS)

Sl. No.	Name	Justification	Quantity
1.	Autoclave	Routine microbial media preparation and decontamination for all courses	02
2.	Refrigerated Centrifuge	For centrifugation requirements of heat labile metabolites like proteins, DNA, enzymes, etc.	01
3.	Shaker with incubator facility	For growth of microbial cultures in all M.Sc. courses <del>and</del> including dissertation	03
4.	Ice flake machine	For handling of life-science based samples and associated practicals designed for M.Sc. courses.	01
5.	Distilled water system (40L per day capacity)	Basic requirement for laboratory experiments	01
6.	UV-Visible spectrophotometer with software (for documentation) and water filter system	Basic requirement facility for M.Sc. practicals and dissertation	01
7.	Thermocycler	For M.Sc. experiments including dissertations	02

H. Pathak 17/12/15      [Signature] 17/12/15      [Signature]  
Braker      [Signature]      [Signature]      [Signature]  
[Signature] 17/12/15      [Signature] 17/12/15

New laboratory (02) for plant tissue cultures (PTC) courses in B.Sc. and M.Sc. with required joint

Mi  
Alshab

Alshab  
Alshab

Alshab

Alshab  
17/12/15

Alshab

Alshab  
17/12/15

Alshab  
17/12/2015

Fermentor and accessories. Allopath

For teaching of bioprocess/fermentation technology to both MSc and BSc students.

Peristaltic pump: Allopath Priz

For teaching bioprocess/microbial technology to MSc students.

Small sample adaptor & spindle s-16 for Brookfield viscometers.

For teaching of rheological properties of fermentation broth and other fluids to MSc students.

Lyophilizer ADP Priz

For concentrating enzymes and proteins. Drying of heat labile compounds.

Electroporator

For genetic engineering of organisms.

Shaker room (orbital shaker with ambient temp-control)

Buchart

Allopath

Rui

(Brugadori Eye)

(Nitor Pathuk)

Seena Rui

ADP

Buchart  
Jagdish Patel

Wijay Jain

dlts.  
17/11/2015

Priz

Real-time PCR: Required for MSc practicals & dissertation

Thermocycler: Required for MSc practical and dissertation

M. 14/12/15 A.D Jones J. Jones

Fluorescence Microscope: Required for Higher SEM B.Sc, M.Sc CRC (BT/MI) and dissertation Exp

J. Jones J. Jones

Burke A.D Jones

J. Jones J. Jones M. 17/12/15

Annex 4

**PDPIAS, CHARUSAT**  
**Minutes of the Meeting (Department of Biological Sciences)**  
**Date: 03/05/2016**  
**Venue: Meeting room (No. 104)**

The meeting of Staff members of Department of Biological Sciences with Principal sir was held on 3<sup>rd</sup> May, 2016 at Room no. 104 from 10.00 A. M. Onward

Following members were present in the meeting.

Dr. Jagdish Patel	Dr. Neeraj Jain
Dr. Neeraj Jain	Dr. Hilor Pathak
Dr. Seema Amin	Dr. Palash Mandal
Dr. Gayatri Dave	Dr. Janki N Thakker
Dr. Aditi Buch	Dr. Darshan Patel

**Agenda for meeting**

1. Checking the overlaps in time table for next semester.

All the faculties checked the proposed time table for the respective overlaps if any of their workloads.

Minor changes were made in the proposed time table considering the few overlaps of workload.

The time table was finalized; however, it arose requirement of 11 functional laboratories simultaneously.

Dr. Gayatri Dave requested Prof. Upadhyay to intervene for the same, the requirements was justified and sir agreed on providing 11 functional laboratories simultaneously (5 on first floor for M.Sc./B.Sc. and 6 on second floor for B.Sc.)

All the faculties discussed about the instrument requirements for the new constructed labs and came to a consensus of a list of instruments (The list is with Dr. Dave).

All faculties also discussed about the execution mode of the 2 credit mini project to be given to the 5<sup>th</sup> semester students. However, it remained undecided.

The faculties also discussed about the instrument requirement given by the research students to Upadhyay sir and it was decided to share the cyclomixer from lab 208 to the research lab.

\* Dr. Chirayu Desai- was busy with paper submission duty.

Dr. Bragdish Iyer was busy with e governance duty.

P D Patel Institute of Applied Sciences

Department of Biological Sciences

Academic Year 2016-17: Distribution of the B Sc Semester V students for Mini-project

NO	ID NO	NAME	Allocated faculty	Name of the topic (tentative as submitted)	Lab allocated
1	14BSC002	BHAVSAR MEGHA MANOJ	Dr Gayatri Dave	Biofuels and Microalgae	Room No. 326
2	14BSC003	BHAVSAR NISHIBEN SHAILESHBHAI			
3	14BSC004	CHANDNANI PRIYANKA HARESH			
4	14BSC005	CHANGANI BANSI VALLABHBHAI			
5	14BSC006	CHAUHAN BHAVIKA PUNJABHAI			
6	14BSC007	DAMA GAURAV ASHOKBHAI			
7	14BSC008	DAVE DOLLY HITENKUMAR			
8	14BSC009	DAVE RAJVI PRASHATBHAI			
9	14BSC010	DHUMMAD VAIBHAVIBAHEN PRAVINSINH			
10	14BSC011	DIXIT BANSARI MITESH			
11	14BSC012	DOBARIYA VIREN DINESHBHAI			
12	14BSC014	JADEJA CHAITANYARAJ JAYESHKUMAR			
13	14BSC015	JADEJA HEENABA NAVALSINH	Dr Neeraj Jain	Human genomic DNA isolation and single nucleotide polymorphism analysis using allele specific PCR	Room No. 326
14	14BSC016	JOSHI MINAL SANDIPKUMAR			
15	14BSC017	KAGDI ZAYNAB			
16	14BSC018	KANSARA ISHVA NIRANJANBHAI			
17	14BSC019	KOTADIYA ADITI GHANSHYAM			
18	14BSC020	KUMAWAT HIMANI KAMLESH			
19	14BSC021	MAGUKIA HASTI KIRITBHAI			
20	14BSC023	MAHIDA HEENABEN DILIPSINH			
21	14BSC024	MANSURI TANZILBEN FIROZBHAI			
22	14BSC025	MARADIYA RUBY RAMESHBHAI			
23	14BSC026	MEHTA MANALI KETANBHAI			
24	14BSC027	MISTRY VRUNDABEN RAKESHKUMAR			
25	14BSC029	PANDYA NIYATI KAMLESH	Dr Janki Thakker	Isolation and purification of enzyme from plant, microbial or animal cell	Room No. 326
26	14BSC030	PANSURIYA SAKSHI ASHVINBHAI			
27	14BSC031	PARMAR ARPITABEN PRAKASHCHANDRA			
28	14BSC032	PARMAR KEJALBEN PRAKASHSINH			
29	14BSC033	PARMAR KINJAL KANTIBHAI			
30	14BSC034	PATEL ABHISHEK KAMLESHBHAI			
31	14BSC035	PATEL AKSHAYKUMAR ARUNBHAI			
32	14BSC036	PATEL AKSHITKUMAR NATVERLAL			
33	14BSC037	PATEL BHARVI HEMANTKUMAR			
34	14BSC038	PATEL DARSHANKUMAR AJITBHAI			
35	14BSC039	PATEL DHARABEN VISHNUBHAI			
36	14BSC041	PATEL DHRUPAL AMITBHAI			
37	14BSC042	PATEL DHRUVI KIRITBHAI	Dr Drashan Patel	Recombinant protein expression and purification	Room No. 326
38	14BSC043	PATEL DHWANI SATISH			
39	14BSC044	PATEL DIMPY PRITESHKUMAR			
40	14BSC045	PATEL DIVYABEN KHODABHAI			
41	14BSC046	PATEL DRASHTIBAHEN MAHESHKUMAR			
42	14BSC047	PATEL ESHA VIRENDRA			
43	14BSC048	PATEL HARSHKUMAR SURENDRABHAI			
44	14BSC050	PATEL HIRAL KIRANBHAI			
45	14BSC051	PATEL KAJAL PANKAJKUMAR			
46	14BSC052	PATEL KARISHMA AJAY			
47	14BSC053	PATEL KESHABEN SATISHBHAI			
48	14BSC055	PATEL KINJALBEN MAHENDRAKUMAR			
49	14BSC056	PATEL KINJALBEN UMESHCHANDRA			
50	14BSC057	PATEL KOMALBEN CHIMANBHAI			
51	14BSC058	PATEL KRIMA JAYESHBHAI			
52	14BSC059	PATEL KRINAL PRAMTHESHKUMAR			
53	14BSC060	PATEL KRISHNABEN DINESHBHAI			
54	14BSC061	PATEL KRUNAL SHAILESHBHAI			

*AD Bhus*  
*C.T.Y. BSc*  
*(1908dnalor)*

*Thakker*

55	14BSC062	PATEL KRUPA PRAFULLBHAI	Dr Palash Mandal	Animal cell culture	Room No. 326
56	14BSC064	PATEL KRUPALI SANJAYKUMAR			
57	14BSC065	PATEL KRUPALI SURESHBHAI			
58	14BSC066	PATEL MADHAVIBEN BHAILALBHAI			
59	14BSC067	PATEL MANALI KRISHNAKUMAR			
60	14BSC068	PATEL MANSI SUNILBHAI			
61	14BSC069	PATEL MRUNALIBEN VASANTBHAI			
62	14BSC070	PATEL NAIYA DILIPBHAI			
63	14BSC072	PATEL NENSYBEN RAJESHKUMAR			
64	14BSC073	PATEL NIDHI SANDIPBHAI			
65	14BSC074	PATEL NIDHI VINILKUMAR	Dr Seema Amin	Isolation of feather degrading microorganisms	Room No. 323
66	14BSC075	PATEL PARI JATINKUMAR			
67	14BSC076	PATEL PARTH ANANDKUMAR			
68	14BSC078	PATEL POOJA PRITESHBHAI			
69	14BSC080	PATEL PRIYALBEN DINESHBHAI			
70	14BSC081	PATEL PURVANG CHIRAG			
71	14BSC082	PATEL RAJ CHETANBHAI			
72	14BSC083	PATEL RIDDHI SANDIP			
73	14BSC084	PATEL RITUKUMARI MAHESHBHAI			
74	14BSC085	PATEL ROSHANIBEN VIJAYBHAI			
75	14BSC086	PATEL RUTU PRAGNESH	Dr Aditi Buch	1. Isolation and characterization of plant growth promoting rhizobacteria 2. General Molecular and Microbial Techniques	Room No. 323
76	14BSC088	PATEL SHIWALI GIRISHBHAI			
77	14BSC089	PATEL TIRTH GOPALBHAI			
78	14BSC090	PATEL TWINKLE NILESHKUMAR			
79	14BSC091	PATEL URJA RAMUBHAI			
80	14BSC092	PATEL VAIBHAVI HITESHBHAI			
81	14BSC093	PATEL VAIDEHI KETANKUMAR			
82	14BSC094	PATEL VAIDEHI LALENDRA			
83	14BSC095	PATEL VANDAN RAJENDRAKUMAR			
84	14BSC096	PATEL VIDHI AMITKUMAR			
85	14BSC097	PATEL VIDHI RAKESHKUMAR	Dr Chirayu Desai	Isolation of antibiotic producing microorganisms from soil	Room No. 325
86	14BSC100	PATEL VRUSIKABEN ASHOKBHAI			
87	14BSC101	PATEL VRUTIBEN PARESHBHAI			
88	14BSC102	PATEL YASH JAYESHBHAI			
89	14BSC104	SAVALIYA RIDDHI ZAVERBHAI			
90	14BSC105	SAVLANI KHUSHBU MUKESHBHAI			
91	14BSC106	SHAH AMI HITESHBHAI			
92	14BSC107	SHAH HARSH ALKESHKUMAR			
93	14BSC108	SHAH HEER PURVESHBHAI			
94	14BSC109	SHAH KEVAL DEVANGBHAI			
95	14BSC110	SHAH KHUSHBU UTTAMBHAI	Dr Bragadish Iyer	Microbial cell factories	Room No. 325
96	14BSC111	SHAH MEET BHUPENDRA			
97	14BSC113	SHAH SHIVANI VIPULBHAI			
98	14BSC115	SHARMA DIVANSHI VIVEKKUMAR			
99	14BSC116	SOLANKI BHARGAVI SANJAY			
100	14BSC117	SOLANKI KRUNALI SURESHKUMAR			
101	14BSC118	SOLANKI MEHUL SURESHBHAI			
102	14BSC119	SONI DEVANGKUMAR KIRITBHAI			
103	14BSC120	SONI SHIVANI SANJAYBHAI			
104	14BSC121	SONI SWEETY RAKESHKUMAAR			
105	14BSC122	THAKKAR HARMI RAJENDRAKUMAR	Dr Bragadish Iyer	Microbial cell factories	Room No. 325
106	14BSC123	TRIVEDI VIBHUTI GITESHBHAI			
107	14BSC125	VASAVA ZINAL THAKORBHAI			
108	14BSC126	VAVADIYA JIGISHABEN VINUBHAI			
109	14BSC127	VISPUTE DIVYANI RAJESH			
110	14BSC128	VOHRA ZENAB MUSTUFA			
111	14BSC129	VYAS DHARA KETANKUMAR			
112	14BSC130	VYAS JAHNAVI JANAKKUMAR			
113	14BSC131	SHARMA KRATEESHA			
114	14BSC132	PATEL PANKTI HITESHKUMAR			

As/Br  
T. U. BSc coordinator

Sharma





Aditi Buch &lt;aditibuch.biochem@charusat.ac.in&gt;

## Execution of Mini-project

Aditi Buch &lt;aditibuch.biochem@charusat.ac.in&gt;

Sat, Oct 1, 2016 at 3:16 PM

To: Janki Thakker <jankithakker.bt@charusat.ac.in>, Darshan Patel <darshanpatel.bt@charusat.ac.in>, "Dr. Neeraj Jain" <neerajjain.as@charusat.ac.in>, Chirayu Desai <chirayudesai.bt@charusat.ac.in>, Gayatri Dave <gayatridave.bt@charusat.ac.in>, Bragadish Iyer <bragadish.as@charusat.ac.in>, seema amin <seemaamin.bt@charusat.ac.in>, palash mandal <palashmandal.bio@charusat.ac.in>

Dear Colleagues,

Following are the some details about execution of Mini-Project for B Sc Semester V commencing from 3rd October, 2016 (Monday) and continuing over two weeks.

1. Attached is the distribution of students across labs and allocation of lab technicians and teaching assistants.
2. Students are expected to learn basic preparatory procedures and simple techniques during the schedule while lab technicians and TAs shall facilitate/teach/supervise the use of laboratory equipment as and when required
3. Use of several facilities for e.g. laminar air flow, autoclave, centrifuge, from the already equipped labs from first floor may be required.
4. As informed by Mauna Madam, most of the requirements ordered for, shall be delivered latest by Tuesday (4th October). Several requirements have been purchased on sharing basis and hence they have to be issued as required with the help of lab-technicians.
5. Mini-project report is required to be generated as a mark of its successful completion, the format for which will be provided shortly.
6. As informed earlier, Mini-project is to be conducted on during the lab-slots (i.e 4 days a week; 3hrs/day)

Thanking you in anticipation of your kind co-operation

Regards

Aditi

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Miniproject allocation.xlsx  
17K

*Department of Biological Sciences*  
**P.D. Patel Institute of Applied Sciences, CHARUSAT**  
Changa-388 421, Dist. Anand. Gujarat, India



## CERTIFICATE

*I hereby certify that this group project entitled "Hands on training to learn general molecular and microbiological techniques." embodies the results of work done by following students of B. Sc. Program, Department of Biological Sciences, P D Patel Institute of Applied Sciences, Charotar University of Science & Technology, Changa-388 421, during the academic year 2016-2017 for the partial fulfillment of the degree of Bachelor of Science in Biotechnology/Microbiology/Biochemistry. The students have satisfactorily completed the project over two weeks with relative contribution proportional to their attendance and participation.*

Sr No	ID No.	Name of the student	Specialization (Biotechnology/Microbiology/Biochemistry)	Attendance (%)
1	14BSC088	PATEL SHIWALI G.	MICROBIOLOGY	82%
2	14BSC090	PATEL TWINKLE N.	BIOCHEMISTRY	96%
3	14BSC091	PATEL URJA R.	MICROBIOLOGY	89%
4	14BSC096	PATEL VIDHI A.	MICROBIOLOGY	82%
5	14BSC102	PATEL YASH J.	BIOTECHNOLOGY	82%

*I further certify that this work has not been submitted to other University or Institution for the award of any Degree or Diploma.*

Place : Changa

Date:

Supervisor

CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY  
P. D. PATEL INSTITUTE OF APPLIED SCIENCES  
B.Sc

Date : 02/10/2017

## Syllabus Details

Effective Year 2017-18

Degree : B.SC  
Total Subjects : 18  
Total Regular Subjects : 5  
Total Elective Subjects : 13

Semester : 4

Group Name : HSS-BSC-IV

Course Code	Course Title	Teaching Scheme					Examination Scheme						
		CREDIT				TOTAL HOUR	TH		PR		PRJ		TOTAL
		TH	PR	PRJ	TOTAL		Internal	External	Internal	External	Internal	External	
HS123.01 E	CRITICAL THINKING AND LOGIC	2.00			2.00	2.00	-	-	0/30	28/70	-	-	100
HS127.01 E	COMMUNICATION SKILLS-2	2.00			2.00	2.00	-	-	0/30	28/70	-	-	100
HS133 E	CREATIVITY, PROBLEM SOLVING AND INNOVATION		2.00		2.00	2.00	-	-	0/30	0/70	-	-	100

Group Name : Core Sem: 4

Course Code	Course Title	Teaching Scheme					Examination Scheme						
		CREDIT				TOTAL HOUR	TH		PR		PRJ		TOTAL
		TH	PR	PRJ	TOTAL		Internal	External	Internal	External	Internal	External	
MI402	GENERAL VIROLOGY	2.00			2.00	2.00	0/15	0/35	-	-	-	-	50
BT401.	BASIC MOLECULAR GENETICS	2.00			2.00	2.00	0/15	0/35	-	-	-	-	50

Group Name : Core Courses

Course Code	Course Title	Teaching Scheme					Examination Scheme						
		CREDIT				TOTAL HOUR	TH		PR		PRJ		TOTAL
		TH	PR	PRJ	TOTAL		Internal	External	Internal	External	Internal	External	
BS401	FOUNDATIONS OF IMMUNOLOGY	2.00			2.00	2.00	0/15	0/35	-	-	-	-	50
BS402	BASIC MOLECULAR BIOLOGY-I	2.00			2.00	2.00	0/15	0/35	-	-	-	-	50
BS403	ANALYTICAL TECHNIQUES IN BIOLOGY	2.00			2.00	2.00	0/15	0/35	-	-	-	-	50
BS404	CELL BIOLOGY-II	2.00			2.00	2.00	0/15	0/35	-	-	-	-	50

**Report****B Sc Semester-V Industrial Tour**09<sup>th</sup> November, 2017

Presented by: Dr Aditi Buch

Coordinator (T.Y BSc)

PDPIAS, CHARUSAT

<b>Date:</b>	09 <sup>th</sup> November, 2017 (Thursday)	
<b>Venue:</b>	Bills Biotech Pvt Ltd, Savli Biotech Park and Savli Biotech Incubator	
<b>Motive of Visit:</b>	(1) To expose students to the on-field application and magnitude of various bioprocesses that they learn in theory (2) Creating awareness about various support schemes for bio-entrepreneurship	
<b>Relation with curriculum</b>	BE509 Industrial Tour (as per teaching scheme)	
<b>Members participating</b>	<b>Students</b>	97 B Sc Semester V Students (as per list attached)
	<b>Teaching Staff</b>	Dr Aditi Buch Dr Bragadish Iyer Dr Gayatri Dave Dr Bhavtosh Kikani
	<b>Non-teaching staff</b>	Mr Ghanshyambhai Patel

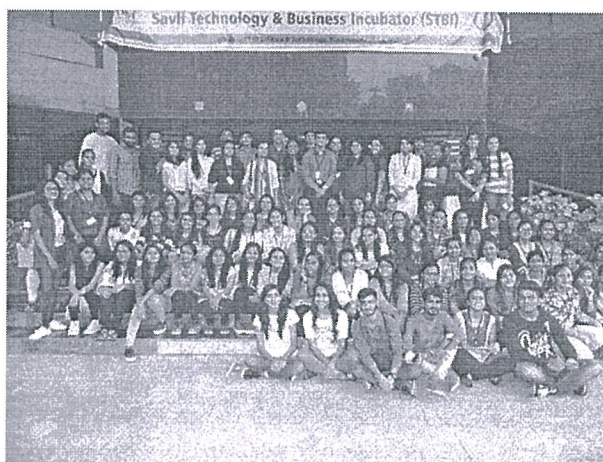
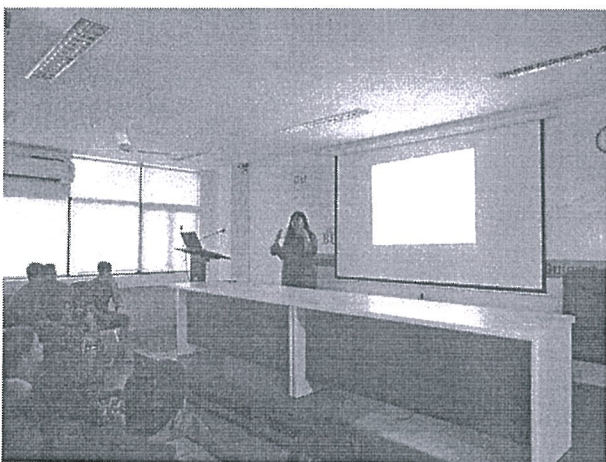
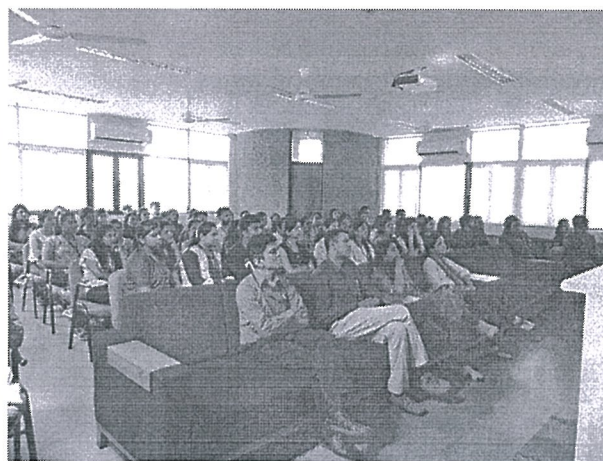
**Nature of Activities Undertaken**

1. Tour commenced at 9:30 a.m from CHARUSAT campus. Dr Gayatri Dave and Dr Bhavtosh Kikani coordinated the assembly and boarding of 91 students from the campus. Two buses from Brahmani Travels were hired for the tour. Dr Aditi Buch and Dr Bragadish Iyer along with 6 other students joined from Baroda.
2. First visit was scheduled at Bill Biotech Pvt Ltd, Savli Biotech Park from 11:15 a.m onwards. The industry representatives demonstrated the large scale fermentor operations, post-production processes, advanced QA lab and waste water treatment plant in 4 batches of students, each accompanied by one faculty. Extremely patient demonstration and explanation at every stage enabled students to understand the industrial scale production of several plant based products in a satisfactory way. The demonstration ended at 1:15 p.m. which was followed by a group photograph at the venue.
3. Subsequently, lunch break was planned at a nearby temple premise at Savli village. The manager at the temple cordially permitted for utilization of the temple premise at our request. As an expression of gratitude a token amount was also donated to the temple trust on behalf of CHARUSAT (receipt attached).
4. Post lunch appointment was procured at Savli Bioincubator; where Ms. Ritu Trivedi presented details about role of bioincubator in facilitating individuals with bright ideas to undertake start-ups. She coordinated with two beneficiaries of the incubator who were already allocated a lab-space there, to come and share their experiences. This turned out to be an interesting experience for the students as per their verbal feedback.
5. The tour culminated at 5:30 p.m. followed by immediate return journey. Snacks were packed and served to the students and accompanying staff in the bus itself. Students reached

CHARUSAT campus at 8:00 p.m in the evening and their safe reach to their destinations was ensured by accompanying faculties through constant follow-ups.

6. Tour was coordinated overall by Dr Aditi Buch while Dr Bragadish Iyer had coordinated the communications with the Industry partners. Dr Gayatri Dave and Dr Bhavtosh Kikani coordinated the students and the related logistics throughout the tour.

### Glimpses



<b>Feedback</b>	Students found the industrial tour worth an experience. The purpose of the industrial visit was met satisfactorily.
<b>Output</b>	<p>Personal interactions with representatives of Bills Biotech Pvt. Ltd. followed by their interaction with the students generated a significant goodwill, based on which they have expressed their willingness to train our selected students as well as have projected a scope to aid placement for our deserving students.</p> <p>The visit was fruitful in the sense that, MD of the company Mr. Pinakeen Patel who for some reasons could not meet the faculties on the day of visit, willingly showed up at the subsequently organized UIIC meet organized at CHARUSAT. He thoroughly interacted with the faculties to explore the possibilities of successful industry-academia tie-up.</p>
<b>Remarks</b>	Organization of the tour was undertaken after due approvals from the University.

*AD Buch*  
*(7.9.2024)*  
*Coordinator*