



Miranda House UNIVERSITY OF DELHI

Departmental Annual Report- 3

Departmental Activities: Curriculum and Beyond

Department: Botany

Academic Year: 2018-19 (1st July 2018 to 30th June 2019)

Part A.1

Students undertaking project work/field work/internship as part of experiential learning component of course work

S. No.	Paper: Ecology/ Systematics/ Environmental Management	Visit was confirmed telephonically.																																																																																										
1	<p>Place of visit: Yamuna Biodiversity Park, Delhi (for Core Papers Ecology and Plant Systematics)</p> <p>Date: 15 March 2019</p> <p>Programme: B.Sc. (H) Botany II Year</p> <p>Course: Environmental Management</p> <p>No. of students: 29</p> <p>Accompanying teachers: Dr.Somdutta Sinha Roy, Dr.Veena Beri.</p> <p>Objectives achieved:</p> <ol style="list-style-type: none"> 1.Field visit as per syllabus 2. Learnt about establishment and importance of wetlands 3. Learnt about how each plant community develops and then attracts different animals to the community 	<p>B.Sc. (H) Botany II Year (2018-19)</p> <table> <thead> <tr> <th>S. No.</th><th>Roll No.</th><th>Name</th></tr> </thead> <tbody> <tr><td>1</td><td>539</td><td>AADYANJALI PRASAD</td></tr> <tr><td>2</td><td>391</td><td>ADITI SONI</td></tr> <tr><td>3</td><td>310</td><td>AKANKSHA TRIPATHI</td></tr> <tr><td>4</td><td>373</td><td>AMISHA GUPTA</td></tr> <tr><td>5</td><td>197</td><td>ANU DEEPTHI MARNI</td></tr> <tr><td>6</td><td>1272</td><td>ANU MIDDHA</td></tr> <tr><td>7</td><td>1063</td><td>ANURADHA NARWAL</td></tr> <tr><td>8</td><td>135</td><td>ASHIMA GUPTA</td></tr> <tr><td>9</td><td>155</td><td>GUNJAN</td></tr> <tr><td>10</td><td>158</td><td>KANCHAN</td></tr> <tr><td>11</td><td>671</td><td>KANIKA THAKUR</td></tr> <tr><td>12</td><td>941</td><td>KIRTI</td></tr> <tr><td>13</td><td>1231</td><td>LEKHANI</td></tr> <tr><td>14</td><td>330</td><td>MANGESH</td></tr> <tr><td>15</td><td>1341</td><td>MONIKA</td></tr> <tr><td>16</td><td>405</td><td>NANDINI DAS</td></tr> <tr><td>17</td><td>315</td><td>POONAM</td></tr> <tr><td>18</td><td>1118</td><td>PRANJAL AGRAWAL</td></tr> <tr><td>19</td><td>333</td><td>PRITY</td></tr> <tr><td>20</td><td>648</td><td>SAKSHI YADAV</td></tr> <tr><td>21</td><td>1223</td><td>SHAILJA</td></tr> <tr><td>22</td><td>126</td><td>SHIKHA DALAL</td></tr> <tr><td>23</td><td>611</td><td>SHIVANI GAUR</td></tr> <tr><td>24</td><td>502</td><td>SHREYA BHARDWAJ</td></tr> <tr><td>25</td><td>1218</td><td>SHREYA SHARMA</td></tr> <tr><td>26</td><td>1400</td><td>SOUMYA</td></tr> <tr><td>27</td><td>299</td><td>SULOCHANA MEENA</td></tr> <tr><td>28</td><td>35</td><td>VARSHA SINGH SOLANKI</td></tr> <tr><td>29</td><td>1020</td><td>YAMINI GIRI GOSWAMI</td></tr> </tbody> </table> <p><i>Sinha Roy</i></p>	S. No.	Roll No.	Name	1	539	AADYANJALI PRASAD	2	391	ADITI SONI	3	310	AKANKSHA TRIPATHI	4	373	AMISHA GUPTA	5	197	ANU DEEPTHI MARNI	6	1272	ANU MIDDHA	7	1063	ANURADHA NARWAL	8	135	ASHIMA GUPTA	9	155	GUNJAN	10	158	KANCHAN	11	671	KANIKA THAKUR	12	941	KIRTI	13	1231	LEKHANI	14	330	MANGESH	15	1341	MONIKA	16	405	NANDINI DAS	17	315	POONAM	18	1118	PRANJAL AGRAWAL	19	333	PRITY	20	648	SAKSHI YADAV	21	1223	SHAILJA	22	126	SHIKHA DALAL	23	611	SHIVANI GAUR	24	502	SHREYA BHARDWAJ	25	1218	SHREYA SHARMA	26	1400	SOUMYA	27	299	SULOCHANA MEENA	28	35	VARSHA SINGH SOLANKI	29	1020	YAMINI GIRI GOSWAMI
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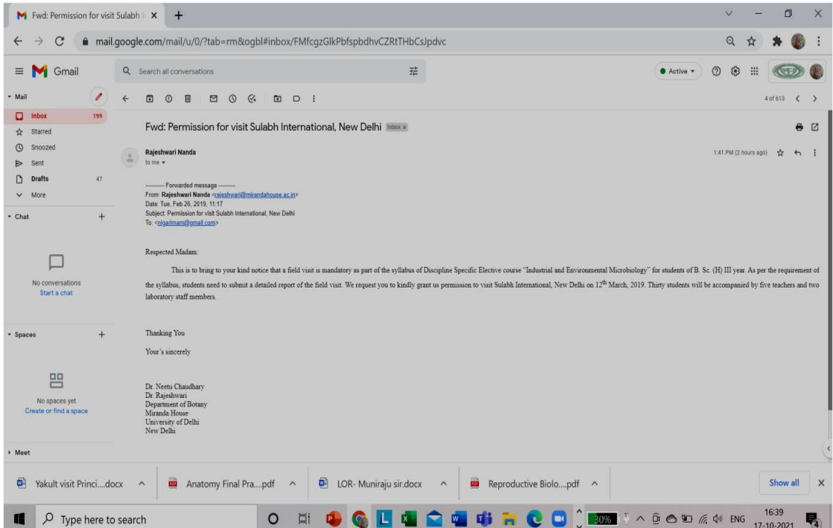
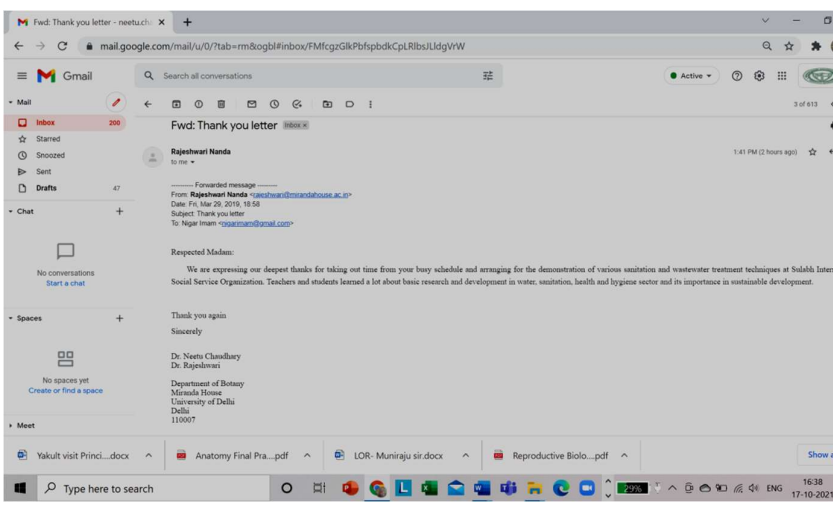
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S. No.	Paper: Industrial and Environmental Microbiology	
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2	<p>Place of visit: Sulabh International Social Service Organisation (for DSE Paper Industrial and Environmental Microbiology)</p> <p>Date: 29 March 2019</p> <p>Programme: B.Sc. (H) Botany III Year</p> <p>Course: Industrial & Environmental Microbiology</p> <p>No. of students: 30</p> <p>Accompanying teachers: Dr. Madhu Bajaj, Dr. Saloni Bahri, Dr. Rashmi Shakya, Dr. Neetu Chaudhary & Dr. Rajeshwari</p> <p>Objectives achieved</p> <ol style="list-style-type: none">1. Field visit as per syllabus2. Gave the students an overview of waste water treatment, sewage treatment and solid waste management.	<p>Request for a Visit</p>  
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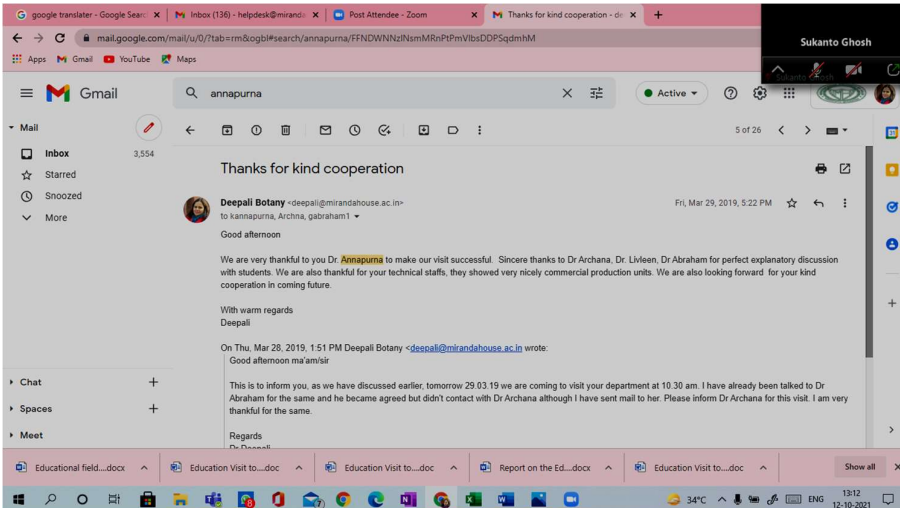

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S. No.	Paper: Biofertilizers	
3	<p>Place of visit: Division of Microbiology, Indian Agricultural Research Institute (IARI) (for SEC Paper Biofertilizers)</p> <p>Date: 29 March 2019</p> <p>Programme: B.Sc. (H) Botany II Year</p> <p>No. of students: 29</p> <p>Accompanying teachers: Dr. Janaki Subramanyan, Dr. Elangbam Geetanjali, Dr. Deepali.</p> <p>Objective achieved:</p> <ol style="list-style-type: none"> 1. Field visit as per syllabus 2. Hands-on training on composting 3. Learnt about the cultivation of <i>Azolla</i> 	<p>Thank You Letter, Visit IARI in 2019</p>  



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	<p>4. Learnt about the importance of biofertilizers</p>	 A group of approximately 25 students and faculty members are posing for a group photo in front of a building. The building has a sign that reads "MICROBIOLOGY" above the entrance. The group is arranged in several rows, with some people standing and others kneeling or sitting in the front. They are all smiling and looking towards the camera. The building is a light-colored, possibly pink or beige, with a dark doorway. There are some potted plants and flowers in the foreground.
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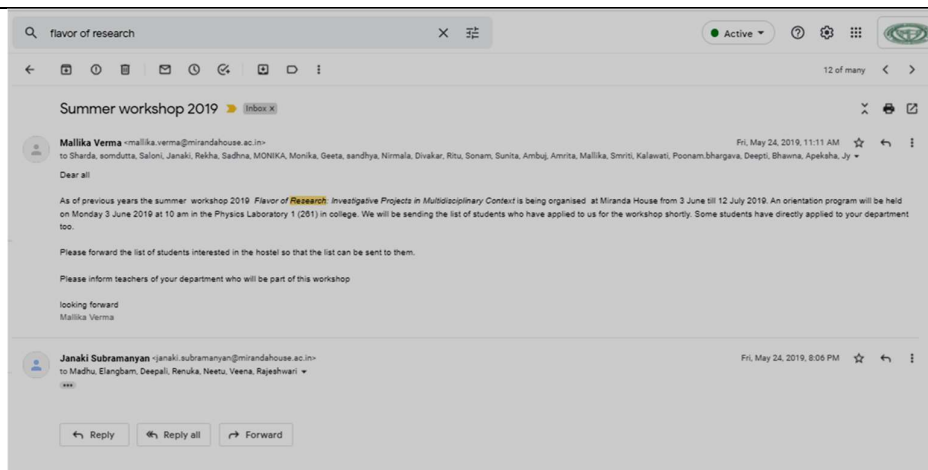
Part A.2

Students undertaking project work/field work/internship (beyond the requirements of coursework)



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Email informing about the Orientation for Summer Workshop *Flavor of Research: Investigative Projects in Multidisciplinary Context* being organised by the DS Kothari Centre for Research and Innovation in Science Education at Miranda House on 03 June 2019.

Programme name	Programme Code	Name of the students
	DSKC Summer Internships 2019	
B.Sc. (H) Botany II Year, Miranda House (Mentors: Dr. Janaki Subramanyan and Dr. Rajeshwari)	Project 1 Project title: A Study On The Effect Of Sodium Chloride On Seed Germination	1. Aadhyanjali 2. Gunjan 3. Mangesh Chauhan 4. Varsha Singh Solanki
B.Sc. (H) Botany II Year Miranda House B.Sc. (H) Botany II Year Hansraj College (Mentors: Dr. Janaki Subramanyan and Dr. Rajeshwari)	Project 2 Project title: A Study On The Effect Of Kinetin On Senescence	1. Kanika Thakur 2. Manchi Jandial 3. Ritika
B.Sc. (H) Botany I Year, Miranda House	Project 3 Project title: Flower And Fruit Senescence	1. Diksha Patel 2. Pallavi Sharma



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(Mentors: Dr. Janaki Subramanyan and Dr. Rajeshwari)		
B.Sc. (H) Botany II Year, Miranda House B.Sc. (H) Botany I Year, Hindu College (Mentor: Dr. Saloni Bahri)	Project 4 Project title: Effect of Different Carbohydrates On <i>in vitro</i> Pollen Germination	1. Anu Deepthi Marni 2. Shreya Sharma 3. Preet Manchanda 4. Yakshna Sharma
B.Sc. (H) Botany II Year, Miranda House B.Sc. (H) Botany II Year, Gargi College B.Sc. (H) Botany, III Year, Miranda House (Mentor: Dr. Saloni Bahri)	Project 5 Project title: Effect Of Nanoparticles And Heavy Metals On Seed Germination	1. Shailja, 2. Soumya, 3. Ritu Kumari, 4. Hari Priya
B.Sc. Life Science II Year, Miranda House (Mentor: Dr. Rashmi Shakya)	Project 6 Project title: Assessment Of Different Developmental Stages Of <i>Catharanthus roseus</i> Flower And <i>in vitro</i> Pollen Germination Studies	1. Manasa Sanaga Reddy

COURSE BASED PROJECT (Experiential Learning)					
Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering	Name of the student studied course on experiential learning through project work/field work/internship
B.Sc. (Honours) Botany II Year, Semester III	556	Intellectual Property Rights (SEC)	UPC-32163302	2018	29 Students
B.Sc. (Honours) Botany II Year, Semester IV	556	Biofertilizers (SEC)	UPC-32163403	2019	29 Students
B.Sc. (Honours) Botany III Year, Semester V	556	Biostatistics (DSC-2)	UPC- 32167502	2018	30 Students



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B.Sc. Life Science III Year, Semester VI	583	Intellectual Property Rights (SEC-4)	UPC- 42163601	2019	39 Students
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Academic Year	2018-2019
Program name	B.Sc. (H) Botany
Program Code	556
Name of the Paper that include experiential learning through project work	Intellectual Property Rights (SEC)
Unique Paper Code	32163302
Year	II year
Semester	III
Total no. of students	29

Projects Completed

Individual projects had to be done as part of the practical curriculum for the paper Intellectual Property Rights. Students had made e-diary based on IPR syllabus. They had presented their project's reports in the form of Power Point Presentation. It was evaluated on the basis of contents and Subject knowledge related to the e-diary. The subject of projects was opted by student itself and they have collected data from available sources of society and market. They had to click the pictures of the products themselves. Google photos of the products were not allowed. They had discussed their data under the headings of Patent, Copyright, Designing, Manufacturing, Production, Trademark, GI tag etc.

Deepali

**B.Sc. (H) Botany II Year (Semester III)
2018-19**

S. No.	Roll No.	Name
1	559	ADITYANAL PRASAD
2	591	ADITI SONI
3	510	AKASHESHA TRIPATHI
4	575	ANISHA GUPTA
5	597	ANU DEEPTI MARINI
6	5272	ANU MIDHA
7	5965	ANURADHA NARWAL
8	475	ASHIMA GUPTA
9	575	CHINIAN
10	538	RANJAN
11	671	RANIKA THAKUR
12	941	RITTI
13	5778	REKHA
14	730	RANGESH
15	5741	RONIKA
16	405	RANJINI DAS
17	515	POONAM
18	5118	PRANJAL AGRAWAL
19	512	PREETI
20	648	SAKSHI YADAV
21	5273	SHALJA
22	576	SHIKHA DALAL
23	611	SHIVANI SALUR
24	502	SHREYA BHARDWAJ
25	5218	SHREYA SHARMA
26	1800	SOURYA
27	295	SUBODHANA MEENA
28	51	VARSHA SINGH SOLANKI
29	5030	YAMINI GINI GOSWAMI

Deepali



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Academic Year	2018-2019
Program name	B.Sc. (H) Botany
Program Code	556
Name of the Paper that include experiential learning through project work	Biofertilizers (SEC)
Unique Paper Code	32163403
Year	II year
Semester	IV
Total no. of students	29

Project Completed

Commons Project had to be done as part of the practical curriculum for the paper Biofertilizers. The Project title was **"Comparative analysis of plant development under different compost by using estimation of proteins"** and report were submitted in hard copy. Students were divided in to the groups based on the different compost used and their evaluation had done by how well they had represented the data. They had studied the growth and development of plants by estimation od proteins of different plant's parts. They have discussed their collected data on the basis of various published articles.

Deepali

B.Sc. (H) Botany II Year (Semester IV) 2018-19

S. No.	Roll No.	Name
1	589	AADYANJALI PRASAD
2	591	ADITI SONI
3	510	AKANKSHA TRIPATHI
4	572	AMISHA GUPTA
5	197	ANU DEEPTI MARRI
6	1272	ANU MIDHA
7	1063	ANURADHA HARWAL
8	125	ASHIMA GUPTA
9	155	GUJAN
10	158	KANCHAN
11	671	KANIKA THAKUR
12	941	KIRTI
13	1111	LEKHANI
14	130	MANGESH
15	1341	MONIKA
16	405	NANDINI DAS
17	515	POONAM
18	1118	PRANJAL AGRAWAL
19	883	PRITY
20	640	SAKSHI YADAV
21	1221	SHAILJA
22	126	SHIKHA DALAL
23	411	SHIVANI GAUR
24	582	SHREYA BHARDWAJ
25	1218	SHREYA SHARMA
26	1400	SOLIMYA
27	299	SULOCHANA MEENA
28	35	VARSHA SINGH SOLANKI
29	1020	YAMINI GRI GOSWAMI

Deepali



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Academic Year	2018-2019
Program name	B.Sc. (H) Botany
Program Code	556
Name of the Paper that include experiential learning through project work	Biostatistics (DSC-2)
Unique Paper Code	32167502
Year	III year
Semester	V
Total no. of students	30

Projects completed

Individual projects had to be done as part of the practical curriculum for the paper Biostatistics. The project report had to be submitted in the the form of power-point presentations and orally presented in the class. Students are evaluated on the basis of how well they have applied different aspects of statistical analysis to the data that they have collected. Each student is expected to collect data from within the college campus (minimum 100 data points) and analyse the data for different measures of central tendencies like mean, median, mode, perform students t-test and find out correlation between two variables. They are expected to formulate their own hypothesis and then accept or reject the same based on their calculations.

Each student had collected the data individually and randomly. Their project topics ranged from a study of marks obtained v/s hours of study; number of chapattis eaten in a day v/s weight of the individual; Pocket money v/s deodorant brand used etc. to laboratory based studies like salt concentration v/s plant height, nitrogen concentration v/s plant weight etc.

B.Sc. (H) Botany III Year (Semester V) 2018-19

S. No.	Roll No.	Name
1	570	Amita Doshi
2	479	Anshu Chh
3	351	Deepika
4	218	Hari Priya
5	114	Isha Singh
6	504	Ism Valentine Devi
7	1519	Iyyn
8	1524	Rajal Yadav
9	354	Ramakshi Rautchik
10	1389	Ranchari
11	1625	Kareena Singh
12	378	Kavita Devi
13	314	Kranthi Kaur
14	276	Rm. Monika
15	1458	Megha Anand
16	641	Mrinalini S Prakash
17	1576	Muskan Saini
18	1584	Nagorini Bhupaleeni Devi
19	235	Neetu Kumari
20	112	Pallabanthula Devi Abhimandhwar
21	584	Preeti Chaurhan
22	310	Ritika
23	360	Sangeeta
24	363	Shikha Sahu
25	1512	Stanisla Lhano
26	1547	Stanisla Yangdol
27	356	Tigrit
28	195	Twista Gokul
29	388	Megha Singh
30	111	Vaishali Bhurana

Pinkaloy

Pinkaloy



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Academic Year	2018-19
Paper Name	SEC 4: Intellectual Property Rights
Unique Paper Code	42163601
Course	B.Sc. Life Sciences
Programme Code	583
Year	III Year
Semester	VI
Total no. of students	39

Projects completed

Students had to submit IPR e-diary individually as part of the practical examination for the paper Intellectual Property Rights. It is of 5 Marks. Students selected topics of their choice from the syllabus such as Trademark, Copyright, GI Industry, GI Food, and others. They had to click the pictures of the selected products themselves. Photos from the internet were not allowed. Students were evaluated based on the product selected by them and the content including number of samples and their original photographs.

B.Sc. Life Science III Year (2018-19)		
S.No.	Roll No.	Name
1	1346	Akanksha Yadav
2	175	Akanksha
3	980	Ashika Singh
4	1570	Ashika
5	1570	Ashika Yadav
6	78	Ashika
7	145	Ashika Singh
8	190	Ashika
9	1246	Ashika Choudhary
10	43	Glory Sinha
11	1341	Harsha Math
12	37	Hemra Marwaha
13	166	Hemra Marwaha
14	1598	Aranya
15		Kajal
16	3064	Kajal
17	57	Kritika Choudhary
18	1265	Mahima Yadav
19	1513	Mahima Singh
20	1451	Mohini Singh
21	279	Meghna Arora
22	1528	Naksh
23	251	Nivedita Singh
24	268	Pooja
25	129	Pooja Singh
26	73	Pooja Singh
27	1260	Priya Gaudhary
28	1434	Rajkumari Singh
29	1586	Sneha Bhardwaj
30	6	Sneha Singh
31	180	Shweta Choudhary
32	278	Shikha Thakur
33	174	Shikha Singh
34	49	Smita Mishra
35	106	Smita S. Ghosh
36	1430	Smita Singh
37	1263	Smita Singh
38	855	Tanisha Yadav
39	1399	Tanya Rana

Teacher's Signature: _____