

# ***An Overview Experiential Learning Programmes In Forestry (2016-2020)***







**An Overview**  
***Experiential Learning Programmes***  
**In Forestry (2016-2020)**

***Compiled By***

**N. S. Thakur and A. A. Mehta**



**COLLEGE OF FORESTRY, ACHF**  
**NAVSARI AGRICULTURAL UNIVERSITY**  
**NAVSARI - 396 450**

## ©An Overview

# Experiential Learning Programmes In Forestry (2016-2020)

### *Compiled By*

**Dr. Narender Singh Thakur**

Astt. Professor (Agroforestry)

Department of Silviculture and Agroforestry

Manager (EL Module- Development of Quality Planting Material in Forestry)

**Dr. Abhishek A. Mehta**

Astt. Professor

Department of Forest Products Utilization

Manager (EL Module- Commercial Apicultrue)

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- Dr P K Shrivastava, Principal and Dean, ACHF, NAU, Navsari, for his continuous encouragement and necessary support for compilation of document
- Faculties associated with EL Units for their cooperation and contribution

### ***Contribution***

Module-I

Dr. M. B. Tandel

Dr. V. M. Prajapati

Dr. R. S. Chauhan

Module-II

Dr. R. P. Gunaga

Dr. L. K. Brehera

Dr. H. T. Hegde

Dr. S. K. Sinha

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**Dr. P.K. Shrivastava**  
**Dean**  
**Faculty of Forestry**  
**Navsari Agricultural University**



## **FOREWORD**

Earn while learn programme provides opportunities to the students to earn while they are learning through part-time jobs. Earning while learning is more than a necessity for students coming from poor financial conditions. This concept not only make student capable to earn to keep going their degrees but also preapre them for future ventures. In this backdrop, Student READY (Rural Entrepreneurship Awareness Development Yojana) programme is an initiative of Indian Council of Agricultural Research to reorient graduates of Forestry and allied subjects for ensuring and assuring employability and develop entrepreneurs for emerging knowledge intensive agriculture. This envisages the introduction of the programme in all the Agricultural Universities as an essential prerequisite for the award of degree to ensure hands on experience and practical training depending on the requirements of respective discipline and local demands. Experiential Learning (EL) with business mode helps the student to develop competence, capability, capacity building, acquiring skills, expertise, and confidence to start their own enterprise and turn job creators instead of job seekers. This is a step forward for “Earn while Learn” concept. Experiential Learning is an important module for high quality professional competence and practical work experience in real life situation to Graduates. The EL provides the students an excellent opportunity to develop analytical and entrepreneurial skills, and knowledge through meaningful hands on experience, confidence in their ability to design and execute project work. College of Forestry has taken a lead in adoption of the Experiential learning programmes at Undergraduate level with successful EL modules viz., **Development of Quality Planting Material in Forestry and Commercial Apiculture**. The compilation "**An Overview - Experiential Learning Programmes**", gives a comprehensive view of these modules with complete details like course structure, student activities as well as financial ins and outs. I congratulate my team members Dr. N. S. Thakur and Dr. A. A. Mehta for this compilation and the associated faculties Dr. R. P. Gunaga, Dr. M. B. Tandel, Dr. V. M. Prajapati, Dr. S. K. Sinha, Dr. L. K. Brehera, Dr. R. S. Chauhan, Dr. H. T. Hegde for their dedicated interest in well management of these EL units.

A handwritten signature in black ink, appearing to read 'P.K. Shrivastava', written over a horizontal line.

**(P.K. Shrivastava)**



## ***Preface***

Students must evaluate their qualification skill and knowledge more prudently because skills and capabilities are also important with ranks or grades. **Benjamin Franklin quotes, “tell me and I forget, teach me and I remember, involve me and I learn”**, this advocate that ‘Learning by doing’ and ‘earning by learning’ is one of the most important pillars of future career development. Under the new course curriculum of ICAR, New Delhi, Student READY (Rural Entrepreneurship Awareness Development Yojana) program which is based on Experiential Learning Programme (ELP) in agricultural education system has been conceptualized for building skills in project development and execution, decision-making, team coordination, with end to end approach to problem solving, accounting, quality control and marketing. The biggest benefit of hands-on training is the opportunity for repeated practice. Project work component in ELP provides several opportunities to students to learn many aspects that cannot be taught in a class room or laboratory. In order to provide such opportunities to the graduates of forestry science, students project one of the important components of the Student READY.

In this direction, we are making every efforts by adherinhg to the concept and aims of ELP units being implemented in College of Forestry to impart training on all aspects to preapre our student to become entrepreneurs. Experiential learning modules namely Development of Quality Planting Material in Forestry and Commercial Apiculture are in commission efficiently at College of Forestry. This compilation "An Overview on Experiential Learning Programmes", provides an elaborat view of these modules. We feel obliged to our Dean, Dr. P. K. Shrivastava, for assigning the task to compile this document. We acknowledge the assistance from Dr. R. P. Gunaga, Dr. M. B. Tandel, Dr. V. M. Prajapati, Dr. S. K. Sinha, Dr. L. K. Brehera, Dr. R. S. Chauhan, Dr. H. T. Hegde, associated faculties, for their devoted attention management of these EL units at all the stages.

### **Dr. N. S. Thakur**

Assistant Professor  
Department of Silviculture & Agroforestry  
College of Forestry, ACHF,  
Navsari Agricultural University, Navsari

### **Dr. A. A. Mehta**

Assistant Professor  
Department of Forest Products and Utilization  
College of Forestry, ACHF,  
Navsari Agricultural University, Navsari





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## **Module I**

### **Development of Quality Planting Material in Forestry**

#### **Commercial Aspects in Forestry- Potential Growth Sector**

Trees are central to our lives. We eat food and fruits from trees, we use paper made from wood pulp, tools with wooden handles, and medicine extracted from trees. We and our animals rest under trees shade and also breathe their air: one large tree produces enough oxygen daily to supply a family of four. Trees are an integral part of agricultural landscapes and are playing increasingly important roles in income provision for rural households.

Forestry as a sector plays a vital role in the socio-economic and rural development of a country apart from its role in maintaining ecological stability particularly in a developing country like India. Forests are a traditional source of a multitude of products mentioned above and have sustained large masses of population. The vast potential of forests to generate employment especially in rural areas, thereby contributing to rural incomes and poverty alleviation has remained unutilized. The country's forests are under tremendous pressure due to the indiscriminate removal of timber, fuel wood, fodder and other forest produce. Though there are numerous afforestation and plantation programs being implemented by the State Forest Departments, Forest based industries, NGOs, etc., Availability of quality planting material well in time and in close proximity to areas where afforestation is to be taken up remains a major constraint in taking up large scale afforestation of wastelands, private lands, etc.

Seedling production is one of the key steps in scaling up or domestication of any species. Each step has to be properly planned and implemented. The way seedlings are handled and managed in a nursery contributes to their survival rate after planting and their subsequent growth performance. Improving seedling quality correlates positively to their survival, growth and productivity. Seedling quality is governed by the genetic make-up of the parent trees and the physical growth of the seedlings. Several types of nurseries exist: individual or private, community or group, or research, commercial and training nursery.

Nursery practices must be consistent and the various techniques closely integrated. If one element in the chain is lacking there will be a negative impact on seedling quality. Good quality seedlings cannot be produced without care and tending. Nursery plants need to be protected from extremes of environmental conditions until they are strong enough to withstand them. To ensure

high quality of seedlings and to provide more opportunities (income, technology transfer), local people are encouraged to establish small-scale community nurseries.

**Does the nursery affect the planting stock?**

The so-called nursery effects have been reported and attributed to the modification of the expression of genetic traits by the nursery environment. Different nurseries use different cultural approaches for production crop plants. This affects the morphological and physiological characteristics of the plants produced. Local nurseries may supply plants better adapted to the local environment than faraway nurseries, although this may apply little to nurseries using greenhouse culture. Nurseries build their reputation on professional competence, reliability, honesty, and on the performance record of the planting stock they supply. To many clients, the reputation of a nursery is the decisive factor in choosing whom to deal with.

The need for forest nurseries emphasizes an important difference between agriculture and forestry. The farmers sow the seeds where his crop is to grow. The forester in most cases shows seeds and raises seedlings in a nursery and then plants them on land to be afforested. There are two reasons for this

- 1) Newly germinated seedlings of most tree species fell in competition with the plants and it is impractical to give each tiny seedlings 3 or 4 m. apart in a plantation, the care needed for survival. Therefore, seedlings are raised together free of any competition until they are sturdy enough for planting out.
- 2) Only in a nursery can the forester afford to provide growing condition to raised healthy vigorous plants. Mainly for reasons of economic, the forest planting sites receives a minimum of soil preparation, fertilizing and maintenance.

As per ICAR, IV<sup>th</sup> Deans’ recommendation the ELP programme is offered to the students during the VII semester for a total duration of 24 weeks with a weightage of 0+10 credit hours.

<b>Component and Major activities</b>	<b>Credits</b>	<b>Semester</b>	<b>Department</b>
<b>FRP 5.2- Experiential Learning (Forest Nursery)</b>	0+5	5 <sup>th</sup>	Department of Silviculture and Agroforestry
<b>FRP 6.4- Experiential Learning (Forest Nursery)</b>	0+5	6 <sup>th</sup>	

1) Orientation and Fundamentals of nursery management			
2) Field Exposure to nurseries			
3) Project execution			

## **Potential of the sector**

### **Need for raising nurseries for large scale afforestation**

The National Forest Policy, 1988 stipulates that one third geographic area of the country should be brought under forest/tree cover. Keeping the same in focus, the Approach Paper to the X Five Year Plan has targeted to bring 25 percent area under forest/tree cover by the end of the Tenth Plan period and 33 percent by the end of the Eleventh Plan period. It also emphasised on establishment of modern nurseries on a catchment area basis to provide quality planting material.

Promotion of decentralised nurseries through credit in the rural areas will lead to easy and timely availability of planting material and in the process lead to creation of employment opportunities and income generation in the rural areas. Forest nurseries will be one of the means for active participation of the communities in future forest regeneration programmes. The proposed large scale afforestation will require establishment of decentralized nurseries through credit support.

A nursery is a place where plants are propagated and grown to plantable size. To make a good plantation, good nursery stock is essential. Major mortality of seedlings in their plantations is due to the wrong size or poor health of the seedlings at the time of planting. In addition, poor seedlings are likely to have slower growth, to be less able to compete with weeds, and to be more liable to damage by insects and pests. Further, in a poor nursery, fewer seedlings will be raised from a given quantity of seed, and there will be considerable waste of money and time. After planting, the plants are immediately exposed to a harsh environment, and are at their most susceptible to damage from drought, grazing, fire, insects etc. Thus sound nursery practice is the foundation of a successful plantation scheme.

**Year of Establishment: 2016-17**

**Funding Agency: ICAR, New Delhi**

## Infrastructure

Sr. No.	Particulars	Units	Cost (Rs. Lakhs)	Justification
1	Green House (Polycarbonate with automatic fogging and cooling facility)	01	18.36	Vegetative propagation of tree species throughout year in controlled environment
2	Net House	03	7.11	Seed germination, seedlings production, hardening of vegetatively propagated plants, protection in harsh conditions,
3	Poly House	01	2.64	Seed germination, vegetative propagation, rooting of cuttings
4	Tissue culture laboratory	01	16.07	Raise plants through tissue culture.

## Module Hierarchy

Designation	Name and contact details
<b>CEO</b>	Dr. P. K. Shrivastava, Principal College of Forestry, ACHF, NAU, Navsari Mob: 9426740728, email: principalcof@nau.in
<b>MD</b>	Dr. M B Tandel, Assistant Professor & Head, Deptt SAF College of Forestry, NAU, Navsari Mob: 9662532811, email: tandelmb@gmail.com
<b>Manager</b>	Dr. N. S. Thakur, Assistant Professor (Agroforestry), Dept. of SAF , College of Forestry, NAU, Navsari Mob:9664579062 email: <a href="mailto:drnsthakur74@gmail.com">drnsthakur74@gmail.com</a>
<b>Associated faculty</b>	1. Dr. V M Prajapati Asst. Professor (Silviculture) Dept. of SAF , College of Forestry, NAU, Navsari 2 Dr. R S Chauhan Assistant Professor (Tree Improvement) Dept. of FBTI , College of Forestry, NAU, Navsari

## Activities

The ELP programme “Development of Quality Planting Material in Forestry”, was funded by Indian Council of Agricultural Research, New Delhi with one time grant of Rs. 72.50 lakhs in 2016. Unit was established during 2016-17 for production of quality planting material of forest tree species including medicinal and aromatic plants. Apart from planting stock, raw material of some medicinal plants (ready to consume as fresh or after semi processing) like *Cymbopogon* spp., *Aloe vera*, *Ocimum* spp, etc are also prepared and sold. The students work out the demand for the supply of planting materials to different agencies involved in afforestation programmes as well as nearby farming communities through market / village survey. Accordingly, the seed sources for quality planting materials/propagules will be identified. Students procure superior seed materials / clones / propagates for raising quality nursery stock and produce tissue culture plants of different priority species. After collection of seeds, processing, pre-treatments to overcome dormancy, storage technique, seed testing etc are done.

Quality planting stock is produced based on technology available (package of practices-suitable media, type and size of container, application of manure/fertilizer/biofertilizer, standardization of hormone for vegetative propagation, etc.) for individual species. Stock produced is grading, packaging and transportation. From seed collection till sale of the stock tending operations like protection from diseases, insect-pest attack, adverse environmental conditions and market fluctuations, impacting production of quality planting material etc. is looked after by the students under the guidance of faculty involved in this ELU. The benefit: cost ratio worked out for the development of quality planting materials of different species. Risk assessment will also be studied and worked out on inputs and outputs for the nursery production. The major activities are listed below

- Nursery preparatory activities
- Procurement of seed, wildling and propagules etc.
- Procurement of material (soil, sand and FYM/vermicompost/compost), implements, poly bags, containers, instruments and chemicals for treatment of soil, cuttings etc.
- Preparation of soil media.
- Bed preparation, soil working and bag filling.
- Raising seedlings and after care
- Seed/cutting/propagule treatment (Physical or chemical if required)

- Sowing/planting in polybags/seedbeds.
- Intercultural operation (weeding, singling, fertilizer application etc.) and plant protection.

**Constraints:**

Planting material raised take longer time to sale. Farmers do not buy commercial species like Eucalytus and Casuarina as they face problem to sell them in local industries. This because the industries sell seedlings raised in their production units and purchase ready plantation wood material from farmers who purchase seedlings from their unit. Only few buyers who need these commercial species in less number come to buy from the University. There is common demand for avenue trees but their sale is also limited due many private nurseries in the local area.

**Strategies developed**

- For quality planting material vegetative multiplication gardens of commercial and industrially important tree species (*Melia dubia*, Eucalyptus and Casuarina) and germplasm blocks of *Aloe vera* and *Cymbopogon flexuosus* has been developed.
- Information regarding available planting material shared among the NGOs, institution and other stakeholders through phone calls.
- Inventorisation of real estate developers, and Civic bodies for demand of avenue plants.

**Products developed (Year wise)**

Year	No of Students trained	Products Developed
2016-17	30	Seedlings of major commercial trees species, avenue trees, medicinal and aromatic plants
2017-18	29	-Do-
2018-19	31	-Do-
2019-20	52	-Do-
2020-21	37	-Do-

**Concluding remarks**

The module has great potential to provide hands on training to the budding forestry professional to make them self employed entrepreneur. Demand for quality planting material of tree and



medicinal and aromatic plants is increasing day by day. The quality planting material in forestry sector is not being owned by private nurseries (only few commercial species), hence to cater the escalating demand of NGOs, tree and medicinal plant based industries, Govt. institutions, watershed management programmes, Mined area reclamation programme, afforestation programmes drives done by Panchayati Raj Institutions *etc.* there is need of professionals in this field. The module will broom the professional with technical skills to address aforesaid issues.

#### Revenue generated and profit sharing

Sr. No.	Year	No. of Students trained	Total expenditure (Rs.)	Total Income (Rs.)	Total Profit (Rs.)	Profit to students (Rs.)*	Profit to faculty (Rs.)*
1	2017-18	29	6925	36172	29247	21924 (75%)	7323 (25%)
2	2018-19	31	31048	86243	55195	41385 (75%)	13810 (25%)
3	2019-20	52	22917	300519	224619	105982 (75%) & 26040 (50%)	69686 (25 & 50%)
4	2020-21	37	51916	142291	28120	14060 (50%)	14060 (50%)

\*Profit sharing- 75 and 25 per cent as per IV<sup>th</sup> and 50 and 50 per cent as per V<sup>th</sup> Dean's committee

#### Per student profit sharing

Rs. 21924/29= Rs. 756/per student in 2017-18

Rs. 41385/31= Rs. 1335/per student in 2018-19

Rs. 105982/38= Rs. 2789/per student in 2019-20

Rs. 26040/14= Rs. 1860/per student in 2019-20

Rs. 14060/37= Rs. 3800/per student in 202-21

## **Module-II- Commercial Apiculture**

### **Commercial Aspects in Forestry- Potential Growth Sector**

There are numerous forest products from plants, animal and mineral sources which have very good potential for commercial exploitation. Several animal products considered to be important from economic point of view. Honey is one of the important products of beneficial insects *i.e.* bees which can be harvested from the nectar of agricultural as well as forest plant species. Bees are also sources of different products like pollen, wax, propolis, venom and royal jelly in addition to honey and they are major sources for pollination services. Bees are playing very significant role in the pollination and thus they are crucial in the production of fruits, vegetables and other edibles.

Among all Apis species, only *A. cerana* and *A. mellifera* are kept commercially by beekeepers. Stingless bees are also reared for getting honey, pollen, propolis and other bee products as well as pollination services. Behavioural limitations of the dwarf and giant honeybees, particularly their practice of open-air nesting, prevents their being kept in man-made hives for reasonably long periods, while hiving colonies in specially constructed containers is essential because it enables the colonies to be manipulated. Colonies of *A. cerana* and *A. mellifera* can be easily domesticated in wooden hives and utilized for their benefits.

In many parts of the world, including several countries in Asia, commercial beekeeping depends on moving the honeybee colonies to places where forage is abundant at certain periods of the year. Such migratory beekeeping often calls for the colonies to be moved several times a year, over distances which may range from a few kilometers to several hundred kilometers from the home base. This approach is practicable only when the colonies are in movable-frame hives, which can be transported without danger to the hives or the colonies. By application of migratory beekeeping approach, Experiential Learning Programme on Commercial Apiculture is running where bee hives are migrated to the particular location where abundant flowering plants are available. Students are often taken to the places for getting practical exposure of commercial harvesting of honey. For study of the honeybees and practical work, bee hives are allotted to the students of ELP for learning different managerial aspects of beekeeping such as colony strength management, supplemental feeding, pest management, seasonal management, etc. Students are also involved in other activities related to commercial apiculture module like honey processing, packaging and marketing, bee flora survey and propagation techniques, bee floral calendar

development, melissopalynology, bee anatomy, capturing of colonies from its natural habitats, apiary visit, etc. Students also get opportunities for developing the value added products from the honey and other bee products.

### **Objectives:**

The Commercial Apiculture ELP module was initiated with the following objectives.

Training, confidence building and exposure of students to:

- Assessment of direct/indirect benefits to Agricultural crops through pollination
- Managerial skill development in handling honey bee boxes
- Providing basic training to the farmers through students
- Consultancy services and income generation
- Production of nucleus hives and selling of bee boxes through queen rearing and colony multiplication
- Production of quality honey
- Production of other bee products
- Marketing of honey

The programme is being undertaken by the students during the V &VI semester for a total duration of 52 weeks with a weightage of 0+10 credit hours. The students are registered for ELP of 0+10 credits which involves two modules of 0+5 credit hours each. The following modules are offered to the students at CoF.

### **Potential of the sector:**

India is abundant in nectar and pollen resources. Over 100 different kinds of bee flora have been identified. Out of the total of about 150 million hectares of cropland, nectar and pollen crops are grown in one third of the area. There are 1.5 million bee colonies in India which produce about 55,000 tonnes of honey annually. India is one of the honey-exporting countries. The major markets for Indian honey are Germany, the USA, the UK, Japan, France, Italy and Spain. Beekeeping provides source of income to about 1.50 lakh person in our country. A major portion of the honey produced in India is used in medicines and only a small quantity finds a place on the table as a food.

There are about 1.5 million bee colonies in India, which produce 55,000 tonnes of honey annually. India is one of the honey-exporting countries. The major markets for Indian honey are

Germany, the USA, the UK, Japan, France, Italy and Spain. There are about 1.5 million bee colonies in India, which produce 55,000 tonnes of honey annually. India is one of the honey-exporting countries. The major markets for Indian honey are Germany, the USA, the UK, Japan, France, Italy and Spain.

**Year of Establishment: 2011-12**

**Funding Agency: ICAR, New Delhi**

**Infrastructure**

Sr. No.	Particulars	Units
1	Langstroth hives	200
2	Apiculture Unit with facilities of Honey processing machine, Honey extractor, Honey strainer, honey bottling machine, Bottle sealing machine, Deep freezer, Comb foundation machine for <i>Apis mellifera</i> drone, <i>A. mellifera</i> (Alloy metal), <i>Apis cerana</i> (Alloy metal), Bee venom collector, Royal jelly extractor, Refracto meter/ Moisture check meter digital (For Honey), HPLC, Pollen dryer and other bee tools and equipments etc.	1

**Hierarchy and Course Distribution**

**Hierarchy**

Designation	Name, Designation and contact details
CEO	Dr. P. K. Shrivastava Principal & Dean College of Forestry, ACHF, NAU, Navsari
MD	Dr. R.P. Gunaga Associate Professor (Forest biology/Agroforestry) College of Forestry, ACHF, NAU, Navsari
Manager	Dr. A. A. Mehta Assistant Professor (Forest Products and Utilization) College of Forestry, ACHF, NAU, Navsari

### Course distribution

Course no.	Title	Credit
FRP 5.3	Experiential Learning (Apiculture)	0+5
FRP 6.5	Experiential Learning (Apiculture)	0+5
		0+10

### Faculty members associated

#### FRP 5.3 & FRP 6.5

Sr. No.	Name of the faculty	Course No.	Course Title
1.	Dr. L. K. Behera	FRP 5.3 & FRP 6.5	Experiential Learning (Apiculture)
2.	Dr. A. A. Mehta		
3.	Dr. H. T. Hegde		
4.	Dr. S. K. Sinha		
	Associated faculty members		
5.	Dr. H .V. Pandya	--	--

### Activities

Following activities are carried under the ELP module

- Study of important bee species i.e. *Apis cerana indica*, *A.mellifera* , *A.florea*, *A.dorsata* and Non- *Apis* species.
- Study of bee flora available in different months during the year.
- Bee floral park and growing potential bee plants.
- Study of morphology, anatomy, colony organization, life cycle and Social behavior of honey bee.
- Insect pest and diseases in honey bee.
- Study of different bee boxes.
- Study of bee equipments and their uses.

- Pollen identification
- Seasonal management of bee colonies.
- Survey for identifying the natural bee hives (*Apis cerana* and *Trigona* spp.).
- Artificial feeding.
- Bee migration.
- Study of swarming and capturing colonies or bee swarm from nature.
- Queen production and rearing technique.
- Separation of Bee colonies and multiplication of colonies.
- Market study of Honey bee products.
- Visit to commercial apiary.
- Wax extraction and sheet formation
- Study of honey extraction, processing, marketing and selling.
- Study of quality standards for honey.
- Skill and Entrepreneurship development in Beekeeping, Ethics in business,
- Study of Economics of Bee rearing (cost benefit analysis). Project preparation & Report writing.

#### **Constraints:**

There are some technical constraints that are faced during the last few years of EL like attack of some bee enemies (for example predatory birds), less availability of nectar and pollen bearing plants throughout the year etc.

Crystallization of honey is a hindrance in the marketing of honey.

#### **Strategies developed**

- Commercial apiculture module is based on the migratory beekeeping where honeybee boxes are shifted to the areas of abundant plants having nectar and or pollen.
- Because of honey processing and proper storage, crystallization of honey is delayed. Increasing awareness regarding the crystallization of honey during marketing is very beneficial.
- Popularization of different unifloral honey and stingless bee honey is done through students working under ELP.

### Products developed

Year	No of Students trained	Products Developed
2016-17	30	Honey from <i>Apis mellifera</i> and Stingless bees
2017-18	29	Honey from <i>Apis mellifera</i> and Stingless bees
2018-19	31	Honey from <i>Apis mellifera</i> and Stingless bees, Wax foundation sheets
2019-20	52	Honey from <i>Apis mellifera</i> and Stingless bees, Wax foundation sheets
2020-21	37	Honey from <i>Apis mellifera</i>

### Concluding Remarks

As people are becoming more health conscious, the products like honey will have ever-increasing demand. Customer may avail honey of different unifloral natural sources such as mesquite, mustard, ajwain, sunflower, sesame, etc. This field has an ample scope for the students for development of managerial skills, entrepreneurship skills and marketing strategy skills in field of beekeeping. Overall it also build up confidence level of the students for self employment generation.

### Revenue generated

Year	Grant Received (Rs.)	No. of Students trained under EL	Product being developed under EL	Revenue earned (Rs) (Profit)	25% Revolving Fund Generated (Rs)	75% Share of income distributed to students (Rs)
2015-16	7000000 (In 2013-14)	36	Honey	111792	27948	83844
2016-17		30	Honey	93160	23290	69870
2017-18	-	29	Honey	185175	46294	138881

2018-19	-	31	Honey, wax sheets	463446	115874	347572
2019-20		38	Honey, wax sheets	208399	38076	114228
					50% Share	50% Share
2019-20		14	Honey, wax sheets		28056	28056
2020-21		37	Honey	223947	111985	111962



## Activities

### Module-I

Development of Quality Planting Material in Forestry  
FRP 5.2 and 6.4 (Experiential Learning (Forest Nursery))

### "ACTIVITY CHART"

FRP 5.2 (0+5) and FRP 6.4 (0+5)

❖ Experiential Learning (Forest Nursery)

Week	Activity
	❖ Orientation and Fundamentals of nursery management
1 <sup>st</sup> & 2 <sup>nd</sup> Week	<ul style="list-style-type: none"><li>➤ Orientation on various aspects of forest plants nursery.</li><li>➤ Nursery site selection, layout and requirements.</li><li>➤ Study of growing media, containers and implements.</li><li>➤ Production plan and nursery techniques of important species.</li></ul>

### ❖ Field Exposure to nurseries

Week	Activity
3 <sup>rd</sup> to 5 <sup>th</sup> Week	<ul style="list-style-type: none"><li>➤ Visit to local nurseries and assessment of demand from potential stakeholders [Institutions, households (for medicinal and aromatic plants and plants of religious importance), farmers and households)].</li><li>➤ Preparation of production and execution plan as per the outcome of the survey</li></ul>

### ❖ Project execution

Week	Activity
------	----------

<b>6<sup>th</sup> to 18<sup>th</sup> Week</b>	<b>Project execution</b>
	<ul style="list-style-type: none"> <li>❖ <b>Quality nursery stock raising</b> <ul style="list-style-type: none"> <li>• Nursery preparatory activities (Bed preparation, soil working and bag filling)</li> <li>• Pre-sowing treatments</li> <li>• Sowing/planting in polybags/seedbeds</li> <li>• Wilding collection and planting</li> <li>• Propagation through cuttings/minicuttings</li> <li>• Intercultural operation (weeding, transplanting, root pruning, hardening and grading).</li> <li>• Fertilizer, irrigation, weed and disease management in nursery</li> </ul> </li> <li>➤ <b>Data recording and other observations</b> <ul style="list-style-type: none"> <li>• Growth data of seedlings (Height and collar diameter, germination percent etc.)</li> <li>• Disease incidence</li> </ul> </li> </ul>

**Module-II-Commercial Apiculture**

**Module-II**  
**Commercial Apiculture**  
**FRP 5.3 and 6.5 Experiential Learning (Apiculture)**

**"ACTIVITY CHART"**

**FRP 5.3 (0+5) and FRP 6.5 (0+5) ❖ Experiential Learning (Apiculture)**

Week	Activity
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<b>1<sup>st</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Orientation. Introduction &amp; Importance of the Apiculture</li> <li>➤ Study of important bee species: <i>Apis cerana indica</i>, <i>A.mellifera</i>, <i>A.florea</i>, <i>A.dorsata</i>, Non- Apis species.</li> <li>➤ Bee-Flora survey* (Bee flora survey is carried out at once a week during whole ELP period)</li> </ul>
<b>2<sup>nd</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Important aspects of selection of apiary site. Migration of the colonies. Cleaning of hives (Once every fortnight)</li> </ul>
<b>3<sup>rd</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ History of beekeeping.</li> <li>➤ Honey bee as biological indicators of ecosystem health.</li> <li>➤ Study of the honeybees, bee flora and Honey flow period, Bee floral park</li> </ul>
<b>4<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Market study of honey bee products</li> <li>➤ Rural and urban market survey</li> <li>➤ Existing consumption and demand of the honey &amp; other bee products. Practical assignments for the students</li> </ul>
<b>5<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Study of bee morphology, colony organization and life cycle</li> <li>➤ Study of honey bee boxes. Social behavior of honey bees.</li> </ul>
<b>6<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Pollen identification &amp; melissopalynology, Bee anatomy practical</li> </ul>
<b>7<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Study of other bee products like propolis, wax, Royal jelly, bee venom etc. Collection of bee pollens.</li> <li>➤ Artificial Feeding. Preparation of supplementary feed materials for bees.</li> </ul>
<b>8<sup>th</sup> &amp; 9<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Preparation of comb foundation sheet. Survey for searching <i>Apis cerana</i> colonies. Practical assignment for the students</li> <li>➤ Wax extraction. Preparation of comb foundation sheet.</li> <li>➤ Development of honey based products</li> <li>➤ Selling of bee products.</li> <li>➤ Study of pesticidal effect on Honey bee.</li> </ul>
<b>10<sup>th</sup> &amp; 11<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Study of stingless bees &amp; their colonies</li> <li>➤ Survey for searching stingless bee colonies.</li> </ul>

<b>12<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Study of Economics of Bee rearing (cost benefit analysis)</li> <li>➤ Visit to apiaries. Marketing skills.</li> </ul>
<b>13<sup>th</sup> &amp; 14<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Capturing bee swarm/colony of Indian bees from natural habitats.</li> <li>➤ Study of queen bee, queen bee production and rearing technique reproduction aspects. Separation of Bee colonies (multiplication).</li> <li>➤ Management of <i>A. dorsata</i> and <i>A. florea</i> colonies</li> </ul>
<b>15<sup>th</sup> &amp; 16<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Study of Quality standards for honey.</li> <li>➤ Study of honey processing</li> <li>➤ Honey analysis</li> </ul>
<b>17<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Visit to Apiaries (Saurashtra and /or Kutch/ other commercial apiaries)</li> <li>➤ Honey extraction and apiary management (practical)</li> </ul>
<b>18<sup>th</sup> Week</b>	<ul style="list-style-type: none"> <li>➤ Report Writing, Presentation and Viva-voce and Evaluation</li> </ul>

## Photographs

### Module-I- Development of Quality Planting Material in Forestry



Green House (Polycarbonate with automatic fogging and cooling facility)



Net House



Poly House



Mahogany seed sowing in net house (ELP batch-2017-18)



Intercultural operation in VMG (ELP batch-2017-18)



Group photograph (ELP-batch 2018-19)



Bag filling operation (ELP-batch-2018-19)



Root pruning operation (ELP-batch-2018-19)

## Module-II-Commercial Apiculture



Honey processing unit



Wax foundation machine



Honey extractor



Pollen dryer



Study of comb Honey



Extraction of Honey



Migratory beekeeping



Bee box kept in field



Making of wax sheet



Colony management activities by students



Bee flora study



Honey production by ELP module



2016-17

Sr. No	US ID	Name of Student	Gender	Email Id	Duration Form	Duration To
1		Bhusara Pratixaben Laxmanbhai	Female		June-2016	December - 2016
2		Amdavadi Trupti Sanjaykumar	Female	<a href="mailto:tsamdavadi1234@gmail.com">tsamdavadi1234@gmail.com</a>	June-2016	December - 2016
3		Baldaniya Arvind Kanubhai	Male	<a href="mailto:abaldaniya3@gmail.com">abaldaniya3@gmail.com</a>	June-2016	December - 2016
4		Bhabhor Kalpanaben Ramanbhai	Female	<a href="mailto:kalpanabhabhor2416@gmail.com">kalpanabhabhor2416@gmail.com</a>	June-2016	December - 2016
5		Chaudhary Vrushali Vijay	Female	Vrushalichaudhary404@gmail.com	June-2016	December - 2016
6		Devda Avtarsingh Chetansingh	Male	<a href="mailto:devdaavtar@gmail.com">devdaavtar@gmail.com</a>	June-2016	December - 2016
7		Patel Dharatiben Kamleshbhai	Female	<a href="mailto:dharatipatel101@gmail.com">dharatipatel101@gmail.com</a>	June-2016	December - 2016
8		Pampaniya Meera Kanabhai	Female	<a href="mailto:Meerapampniya9996@gmail.com">Meerapampniya9996@gmail.com</a>	June-2016	December - 2016
9		Gandhi Nidhi Hiteshbhai	Female	<a href="mailto:nidhigandhi1710@yahoo.com">nidhigandhi1710@yahoo.com</a>	June-2016	December - 2016
10		Govind Bose	Male	<a href="mailto:govindbose50@gmail.com">govindbose50@gmail.com</a>	June-2016	December - 2016
11		Hadiya Vijay Gabharubhai	Male	<a href="mailto:hadiyavijay786@gmail.com">hadiyavijay786@gmail.com</a>	June-2016	December - 2016
12		Galani Rahul Bharatbhai	Male	<a href="mailto:rahulgalani9999@gmail.com">rahulgalani9999@gmail.com</a>	June-2016	December - 2016
13		Nai Chetanbhai Ranabhai	Male	<a href="mailto:chetannai75@gmail.com">chetannai75@gmail.com</a>	June-2016	December - 2016
14		Patel Ankitaben Arvindbhai	Female	<a href="mailto:Patelankiii1994@gmail.com">Patelankiii1994@gmail.com</a>	June-2016	December - 2016
15		Patel Avnish Bharatbhai	Male	<a href="mailto:avnish.patel17@gmail.com">avnish.patel17@gmail.com</a>	June-2016	December - 2016
16		Patel Ketuben Shaileshkuma	Female	<a href="mailto:ketupatelkd@gmail.com">ketupatelkd@gmail.com</a>	June-2016	December - 2016
17		Patel Pratik Nareshbhai	Male	<a href="mailto:pratikpatel2574@gmail.com">pratikpatel2574@gmail.com</a>	June-2016	December - 2016
18		Patel Riddhi Harmanbha	Female	<a href="mailto:riddhipatel2574@gmail.com">riddhipatel2574@gmail.com</a>	June-2016	December - 2016
19		Patelia Yagnesh Arjunbhai	Female	<a href="mailto:yagneshpatelia@gmail.com">yagneshpatelia@gmail.com</a>	June-2016	December - 2016
20		Pateliya Hitesh Hamabhai	Male	<a href="mailto:hiteshpateliya512@gmail.com">hiteshpateliya512@gmail.com</a>	June-2016	December - 2016
21		Rathwa Rajubhai Maniyabhai	Male	<a href="mailto:rajurathwa28@gmail.com">rajurathwa28@gmail.com</a>	June-2016	December - 2016

22		Sagathiya Jayesh Kishorbhai	Male	<a href="mailto:Jayeshsagathiya243@gmail.com">Jayeshsagathiya243@gmail.com</a>	June-2016	December-2016
23		Varun Saini	Male	<a href="mailto:sainivarun21866@gmail.com">sainivarun21866@gmail.com</a>	June-2016	December-2016

### 2017-18

Sr. No	USID	Name of Student	Gender	Email Id	Duration Form	Duration To
1	U-12-GJ-03-003-B-R-001	Rishi Kumar Shreejayprakash Nirmal	Male	-	June- 2017	December - 2017
2	U-13-GJ-03-003-B-R-001	Rameshkumar Chelabhai Chaudhary	Male	rmsnau@gmail.com	June- 2017	December - 2017
3	U-13-GJ-03-003-B-R-002	Urvashi Naranbhai Bakotra	Female	bakotra.urvas hi 111@ gmail.com	June- 2017	December - 2017
4	U-13-GJ-03-003-B-R-003	Prabhatsingh Punabhai Baria	Male	Prabhatbaria1 00@gmail.co m	June- 2017	December - 2017
5	U-14-GJ-03-003-B-R-001	Viragkumar Mukeshbhai Chaudhari	Male	viragchaudha ry709@gmail .com	June- 2017	December - 2017
6	U-14-GJ-03-003-B-R-002	Piyush Mavjibhai Ankoliya	Male	piyushankoli ya123@gmai l.com	June- 2017	December - 2017
7	U-14-GJ-03-003-B-R-003	Samalabhai GodabhaiBodar	Male	shyambodar1 2345@gmail. com	June- 2017	December - 2017
8	U-13-GJ-03-003-B-R-004	Punamkumari Chandrajit Chauhan	Female	punachauhan 325@gmail.c om	June- 2017	December - 2017
9	U-14-GJ-03-003-B-R-004	Sanghdeep Dineshbhai Chauhan	Male		June- 2017	December - 2017
10	U-14-GJ-03-003-B-R-005	Mayur Sureshbhai Kakadiya	Male	punachauhan 325@gmail.c om	June- 2017	December - 2017
11	U-14-GJ-03-003-B-R-006	Prakashbhai Bhupatbhai Katariya	Male	pkoahir497@ gmail.com	June- 2017	December - 2017
12	U-14-GJ-03-003-B-R-007	JashkumarJaheshbhai Kedariya	Male	j444515@gm ail.com	June- 2017	December - 2017
13	U-14-GJ-03-003-B-R-008	Dhyey Kishorbhai Madhani	Male	dhyeymadha ni@gmail.co m	June- 2017	December - 2017
14	U-14-GJ-03-003-B-R-009	Soorajbhai Balubhai Ninama	Male	-	June- 2017	December - 2017
15	U-14-GJ-03-003-B-R-010	Apexa Shaileshbhai Patel	Female	<a href="mailto:Apexapatel2696@gmail.com">Apexapatel2696@gmail.com</a>	June- 2017	December - 2017

				<a href="#">m</a>		
16	U-14-GJ-03-003-B-R-011	Jay Dilipkumar Patel	Male	jaydadga143@gmail.com	June- 2017	December - 2017
17	U-14-GJ-03-003-B-R-012	Jitendra Ashvinkumar Patel	Male	jitendrapatel781415@gmail.com	June- 2017	December - 2017
18	U-14-GJ-03-003-B-R-024	Mehfuza Mohammadali Patel	Female	mehfuzapatel282@gmail.com	June- 2017	December - 2017
19	U-14-GJ-03-003-B-R-014	Mehulkumar Pravinbhai Patel	Male	mehul66533.MP@gmail.com	June- 2017	December - 2017
20	U-14-GJ-03-003-B-R-015	Payalkumari Chhotubhai Patel	Female	payal.patel94@yahoo.com	June- 2017	December - 2017
21	U-14-GJ-03-003-B-R-016	Pinkal Sureshbhai Patel	Male	-	June- 2017	December - 2017
22	U-14-GJ-03-003-B-R-017	Trupal Kiranbhai Patel	Male	trupalpatel318@gmail.com	June- 2017	December - 2017
23	U-14-GJ-03-003-B-R-018	Jigneshkumar Pravinbhai Prajapati	Male	jignesh456p792101@gmail.com	June- 2017	December - 2017
24	U-14-GJ-03-003-B-R-019	Mittalben Jayant Bhai Prajapati	Female	Mittalprajapati512@gmail.com	June- 2017	December - 2017
25	U-14-GJ-03-003-B-R-020	Pratibha Mohanlal Gamit	Female	Mittalprajapati512@gmail.com	June- 2017	December - 2017
26	U-14-GJ-03-003-B-R-021	Bhaveshkumar Karsanbhai Purohit	Male	bhavesh.purohit98@gmail.com	June- 2017	December - 2017
27	U-14-GJ-03-003-B-R-025	Mayurbhai Lumbhabhai Ram	Male	rammayur132@gmail.com	June- 2017	December - 2017
28	U-14-GJ-03-003-B-R-023	Keyurkumar Ramanbhai Rathod	Male	rathodkeyur2404@gmail.com	June- 2017	December - 2017
29	U-12-GJ-03-003-B-R-001	Chirag Savajibhai Vighasia	Male	chiragvaghasia974@gmail.com	June- 2017	December - 2017

### 2018-19

Sr. No	USID	Name of Student	Gender	Email Id	Duration Form	Duration To
1	I-15-GJ-03-003-B-R-028	Arun A.	Male	arun85780@gmail.com	June- 2018	December- 2018

2	U-15-GJ-03-003-B-R-001	Dasharath Sendhabhai Chaudhary	Male	dasharaths242@gmail. com	June-2018	December-2018
3	U-15-GJ-03-003-B-R-002	Hirabhai Cheharabhai Chaudhary	Male	chaudharyhira777@gmail.com	June-2018	December-2018
4	U-15-GJ-03-003-B-R-003	Pooja Kishorbhai Chudasma	Female	poojachudasma178@gmail.com	June-2018	December-2018
5	U-15-GJ-03-003-B-R-004	Rakeshkumar Manubhai Jaliya	Male	rakeshjaliya9099@gmail.com	June-2018	December-2018
6	U-15-GJ-03-003-B-R-005	Parth Bhagavanji Kanani	Male	Parthkanani07@gmail.com	June-2018	December-2018
7	U-15-GJ-03-003-B-R-006	Sushantbhai Bhupendrabhai Kunwar	Male	ksrj203@gmail.com	June-2018	December-2018
8	U-15-GJ-03-003-B-R-008	Bansibhai Pravinbhai Malaviya	Male	Bansimalviya094@gmail.com	June-2018	December-2018
9	U-15-GJ-03-003-B-R-009	Akbarhusen KamaraliMashi	Male	abidhussainakbar@gmail.com	June-2018	December-2018
10	U-15-GJ-03-003-B-R-010	Nikhil Karshanbhai Metaliya	Male	metaliyanikhil456@gmail.com	June-2018	December-2018
11	I-15-GJ-03-003-B-R-029	Priya Nawria	Female	priyanawriab@gmail.com	June-2018	December-2018
12	U-15-GJ-03-003-B-R-011	DhirendraVinodbhai Nai	Male	dhirendrarathod1992@gm	June-2018	December-2018
13	U-15-GJ-03-003-B-R-012	Divyarajsinh Ranjitsinh Padheriya	Male	drpadheriya96@icloud.com	June-2018	December-2018
14	U-15-GJ-03-003-B-R-013	Aakashkumar Durlabhbhai Patel	Male	rlife192@gmail.com	June-2018	December-2018
15	U-15-GJ-03-003-B-R-014	Anandkumar Vishrambhai Patel	Male	Patelanand2741998@gmail.com	June-2018	December-2018
16	U-15-GJ-03-003-B-R-015	Ankitaben Kantilal Patel	Female	ankitakp98@gmail.com	June-2018	December-2018
17	U-15-GJ-03-003-B-R-016	Chitra Kundan Patel	Female	chitrapatel42@gmail.com	June-2018	December-2018
18	U-15-GJ-03-003-B-R-017	Henishakumari Ajitbhai Patel	Female	henipatel30897@gmail.com	June-2018	December-2018
19	U-15-GJ-03-003-B-R-018	Jenish Vinodbhai Patel	Male	Pateljenish123@gmail.com	June-2018	December-2018
20	U-15-GJ-03-003-B-R-019	Krupalben Jitendrabhai Patel	Female	krupalpatel171121@gmail.com	June-2018	December-2018
21	U-15-GJ-03-003-B-R-020	Sohamkumar Kishorbhai Patel	Male	omsohampatel1997@gmail.com	June-2018	December-2018
22	U-15-GJ-03-003-B-R-021	Zankhnaben Thakorabhai Patel	Female	patelzankhna156@gmail.com	June-2018	December-2018
23	U-15-GJ-03-	Kejal Valjibhai	Female	rudanikejal@gm	June-	December-

	003-B-R-022	Rudani		ail.com	2018	2018
24	I-15-GJ-03-003-B-R-030	Sharooque Nassal A. P.	Male	sharooquenasal@gmail.com	June-2018	December-2018
25	U-15-GJ-03-003-B-R-023	Minaxiben Satishbhai Solanki	Female	sharooquenasal@gmail.com	June-2018	December-2018
26	U-15-GJ-03-003-B-R-024	Avinash Arvind Suvagiya	Male	Avisuvagiya314@gmail.com	June-2018	December-2018
27	U-15-GJ-03-003-B-R-025	Jaykumar NarendrabhaiTandel	Male	tandelvicky987654321@gmail.com	June-2018	December-2018
28	U-15-GJ-03-003-B-R-026	Hetal NileshbhaiVanpariya	Female	vanpariyahetal0@gmail.com	June-2018	December-2018
29	U-15-GJ-03-003-B-R-027	Paras Viththalbhai Vasoya	Male	Parasvasoya27@icloud.com	June-2018	December-2018
30	I-15-GJ-03-003-B-R-031	Vishal Mandloi	Male	Vishalmandloi1418@gmail.com	June-2018	December-2018

### 2019-20

Sr. No	USID	Name of Student	Gender	Email Id	Duration Form	Duration To
1	U-16-GJ-03-003-B-R-001	Makwana Rahulkumar Chanabhai	Male	rahulmakwana797@gmail.com	June-2019	December-2019
2	U-16-GJ-03-003-B-R-002	Bhakarani Vanraj Savjibhai	Female	vanrajbhakarani@gmail.com	June-2019	December-2019
3	U-16-GJ-03-003-B-R-003	Bhalodiya Heetkumar Ramanikbhai	Male	heetbhalodiya5199@gmail.com	June-2019	December-2019
4	U-16-GJ-03-003-B-R-004	Bhammar Dadu Shamalabhai	Male	ahirdadu65@gmail.com	June-2019	December-2019
5	U-16-GJ-03-003-B-R-005	Bhanderi Vishal Arvindbhai	Male	vishal.bhanderi@yahoo.com	June-2019	December-2019
6	U-16-GJ-03-003-B-R-006	Gamit Mayur Maheshbhai	Male	mg1221998@gmail.com	June-2019	December-2019
7	U-16-GJ-03-003-B-R-007	Gamit Ronak Arvindkumar	Male	ronakgamit08@gmail.com	June-2019	December-2019
8	U-16-GJ-03-003-B-R-008	Gorfad Krishna Parbatbhai	Female	kpgorfad1999@gmail.com	June-2019	December-2019
9	U-16-GJ-03-003-B-R-009	Hadiya Jaymin Dharmeshbhai	Male	jayminhadiya6@gmail.com	June-2019	December-2019
10	U-16-GJ-03-003-B-R-010	Hingrajiya Bhoomiben Ramnikbhai	Female	hingrajiyabhoomi@gmail.com	June-2019	December-2019
11	U-16-GJ-03-003-B-R-011	Hothi Rupenkumar Rasikbhai	Male	rupenhothi1212@gmail.com	June-2019	December-2019
12	U-16-GJ-03-003-B-R-012	Khagad Hinaben Kanubhai	Female	hinakhagad101@gmail.com	June-2019	December-2019

13	U-16-GJ-03-003-B-R-013	Khunt Trupenbhai Jivrajbhai	Male	khunttrupen340@gmail.com	June-2019	December-2019
14	U-16-GJ-03-003-B-R-014	Machhi Hemangini Ashokbhai	Female	hemanginimachhi@gmail.com	June-2019	December-2019
15	U-16-GJ-03-003-B-R-015	Chaudhari Mahimaben Bharatbhai	Female	mahimachaudhari209@gmail.com	June-2019	December-2019
16	U-16-GJ-03-003-B-R-016	Makadia Riyaben Ajaybhai	Female	riyamakadiya2506@gmail.com	June-2019	December-2019
17	U-16-GJ-03-003-B-R-017	Marakana Foram Ramniklal	Female	marakanaforam89@gmail.com	June-2019	December-2019
18	U-16-GJ-03-003-B-R-018	Naik Joy	Male	joysnaik@gmail.com	June-2019	December-2019
19	U-16-GJ-03-003-B-R-019	Pandya Yogeshkumar Manubhai	Male	pandya.yogesh.m7@gmail.com	June-2019	December-2019
20	U-16-GJ-03-003-B-R-020	Patel Chintankumar Rajeshbhai	Male	chintan2791@gmail.com	June-2019	December-2019
21	U-16-GJ-03-003-B-R-021	Patel Deepkumar Hirabhai	Male	deeppatel12455@gmail.com	June-2019	December-2019
22	U-16-GJ-03-003-B-R-022	Patel Harshkumar Nareshbhai	Male	harshpatel27899@gmail.com	June-2019	December-2019
23	U-16-GJ-03-003-B-R-023	Patel Nehakumari Rasikbhai	Female	nehap10299@gmail.com	June-2019	December-2019
24	U-16-GJ-03-003-B-R-024	Patel Twinkalben Sanjaybhai	Female	twinkalpatel1308@gmail.com	June-2019	December-2019
25	I-16-GJ-03-003-B-R-034	Preeti	Female	preeti1997vats@gmail.com	June-2019	December-2019
26	U-16-GJ-03-003-B-R-025	Raiyani Umang Ashvinbhai	Male	raiyaniumang.95@gmail.com	June-2019	December-2019
27	U-16-GJ-03-003-B-R-026	Ramani Darshna Jaytibhai	Female	ramanidarshna23@gmail.com	June-2019	December-2019
28	U-16-GJ-03-003-B-R-027	Rana Yash Balrajchandra	Male	yashrananau@gmail.com	June-2019	December-2019
29	U-16-GJ-03-003-B-R-028	Rangani Mohit Ratilal	Male	mohitrangani178@gmail.com	June-2019	December-2019
30	U-16-GJ-03-003-B-R-029	Rathod Tanvikumari Nileshbhai	Female	rathodtanvi29@gmail.com	June-2019	December-2019
31	I-16-GJ-03-003-B-R-035	SouravManoharan	Male	souravmanoharan2013@gmail.com	June-2019	December-2019
32	U-16-GJ-03-003-B-R-030	Surani Vishalbhai Ghelabhai	Male	suranivishal7711@gmail.com	June-2019	December-2019
33	U-16-GJ-03-	Tandel	Female	purva692000@g	June-	December-

	003-B-R-031	Purvakumari Anilbhai		mail.com	2019	2019
34	U-16-GJ-03-003-B-R-032	Turi Sajanbhai Bhomabhai	Male	sajanbarot1234@gmail.com	June-2019	December-2019
35	U-16-GJ-03-003-B-R-033	Vagadiya Bhautik Mukeshbhai	Male	bhautikm.vagadiya@yahoo.com	June-2019	December-2019
36	U-13-GJ-03-009-B-R-003	Bhammar Gigubhai Najabhai	Male	giguahir1395@gmail.com	June-2019	December-2019
37	U-13-GJ-03-009-B-R-002	Vaghela Piyushkumar Savsingbhai	Male	vaghelapiyush734@gmail.com	June-2019	December-2019
38	U-15-GJ-03-003-B-R-007	Makwana Kuldip Bhartkumar	Male	patilkuldip2110@gmail.com	June-2019	December-2019
39	I-17-GJ-03-003-B-R-021	Ajay Khakha	Male	ajaykhakha74@gmail.com	July, 2019	June, 2020
40	I-17-GJ-03-003-B-R-022	Amal A L	Male	amalputhussery007@gmail.com	July, 2019	June, 2020
41	U-17-GJ-03-003-B-R-003	Bharadva Mansi Umeshbhai	Female	mansibharadva@gmail.com	July, 2019	June, 2020
42	U-17-GJ-03-003-B-R-004	Chauhan Jahanvi Dilipbhai	Female	jhanvichauhan09@gmail.com	July, 2019	June, 2020
43	U-17-GJ-03-003-B-R-009	Kumbhani Nima Rashikbhai	Female	nimakumbhani184@gmail.com	July, 2019	June, 2020
44	U-17-GJ-03-003-B-R-010	Patel Arti Manilal	Female	artip3594@gmail.com	July, 2019	June, 2020
45	U-17-GJ-03-003-B-R-011	Patel Preyash Shaileshbhai	Male	peri4299@gmail.com	July, 2019	June, 2020
46	I-17-GJ-03-003-B-R-023	Rakesh Panday	Male	rakeshpanday233@gmail.com	July, 2019	June, 2020
47	U-17-GJ-03-003-B-R-014	Tandel Dollykumari Narendrabhai	Female	<a href="mailto:dollytandel28@gmail.com">dollytandel28@gmail.com</a>	July, 2019	June, 2020
48	U-17-GJ-03-003-B-R-015	Thumbar Bhavika Sanjaybhai	Female	thumbbarbhavikab@gmail.com	July, 2019	June, 2020
49	U-17-GJ-03-003-B-R-016	Thumbar Payal Dineshbhai	Female	payalthumbar123@gmail.com	July, 2019	June, 2020
50	U-17-GJ-03-003-B-R-017	Vaghasiya Sanjana Jayasukhbhai	Female	<a href="mailto:sanjana.vaghasiya@gmail.com">sanjana.vaghasiya@gmail.com</a>	July, 2019	June, 2020
51	U-17-GJ-03-003-B-R-018	Vaghela Yuvrajsinhji Hitendrasinhji	Male	vaghelayuvraj51@gmail.com	July, 2019	June, 2020
52	U-17-GJ-03-003-B-R-020	Vasava Pritiben Shantilalbhai	Female	preetivasava41346@gmail.com	July, 2019	June, 2020

**2020-21**

<b>Sr. No</b>	<b>USID</b>	<b>Name of Student</b>	<b>Gender</b>	<b>Email Id</b>	<b>Duration Form</b>	<b>Duration To</b>
1	U-17-GJ-03-009-B-R-001	Rashmin Mukeshbhai Savaliya	Male	mgv221098@gmail.com	July-2020	Jan-2021
2	U-18-GJ-03-009-B-R-008	Shivaniben Pareshbhai Agravat	Female	shivaswapn@gmail.com	July-2020	Jan-2021
3	U-18-GJ-03-009-B-R-009	Ritesh Maheshbhai Ahir	Male	ahirritesh19@gmail.com	July-2020	Jan-2021
4	I-18-GJ-03-009-B-R-001	Akhila C. K.	Female	akhilack01@gmail.com	July-2020	Jan-2021
5	U-18-GJ-03-009-B-R-010	Ananya Birendra Prasad	Female	prasadananya1927@gmail.com	July-2020	Jan-2021
6	I-18-GJ-03-009-B-R-002	Arathi Chandran	Female	arathichandran2000@gmail.com	July-2020	Jan-2021
7	U-18-GJ-03-009-B-R-011	Viralkumar Zinubhai Bhusara	Male	viralbhusara2001@gmail.com	July-2020	Jan-2021
8	U-18-GJ-03-009-B-R-012	Masumben Kanubhai Chaudhari	Female	masumchaudhari134@gmail.com	July-2020	Jan-2021
9	U-18-GJ-03-009-B-R-013	Ashakumari Parasottambhai Gamit	Female	gamitasha3082@gmail.com	July-2020	Jan-2021
10	U-18-GJ-03-009-B-R-014	Kanjee Amrutbhai Gorfad	Male	gorfadkanji1213@gmail.com	July-2020	Jan-2021
11	U-18-GJ-03-009-B-R-015	Navneetbhai Mahasukhbhai Kantariya	Male	kantariyanavnit2000@gmail.com	July-2020	Jan-2021
12	U-18-GJ-03-009-B-R-016	Piyush Bhojabhai Karavadra	Male	karavadrapiyush1116@gmail.com	July-2020	Jan-2021
13	U-18-GJ-03-009-B-R-017	Rajeshkumar Govindbhai Lakum	Male	lakumrajesh08@gmail.com	July-2020	Jan-2021
14	U-18-GJ-03-009-B-R-018	Sidhdharthkumar Manishbhai Mali	Male	sidhdharth8@gmail.com	July-2020	Jan-2021



15	I-18-GJ-03-009-B-R-003	Manish Soni	Male	manishsoni38ms@gmail.com	July-2020	Jan-2021
16	U-18-GJ-03-009-B-R-019	Anurag Arbindkumar Mehta	Male	anuragmehta41@gmail.com	July-2020	Jan-2021
17	U-18-GJ-03-009-B-R-020	Purv Rameshbhai Modi	Male	purvmodi2792000@gmail.com	July-2020	Jan-2021
18	U-18-GJ-03-009-B-R-021	Dhaval Nandkishorbhai Naghera	Male	dhavalnaghera21@gmail.com	July-2020	Jan-2021
19	U-18-GJ-03-009-B-R-022	Simran Paresh Panchal	Female	simran.p.panchal@gmail.com	July-2020	Jan-2021
20	U-18-GJ-03-009-B-R-023	Bhargaviben Maheshbhai Patel	Female	patelbhargavi895@gmail.com	Feb-2021	June-2021
21	U-18-GJ-03-009-B-R-024	Ektaben Kirtibhai Patel	Female	ek054patel@gmail.com	Feb-2021	June-2021
22	U-18-GJ-03-009-B-R-025	Suhaniben Ghanshyambhai Patel	Female	suhanipatel989@gmail.com	Feb-2021	June-2021
23	U-18-GJ-03-009-B-R-026	Tirthkumar Rasikkumar Patel	Male	tirthpatel.umiyapan@gmail.com	Feb-2021	June-2021
24	U-18-GJ-03-009-B-R-027	Harshadbhai Babubhai Prajapati	Male	prajapatiharshad37602@gmail.com	Feb-2021	June-2021
25	U-18-GJ-03-009-B-R-028	Mahesh kumar Rameshbhai Prajapati	Male	maheshprajapati6119@gmail.com	Feb-2021	June-2021
26	U-18-GJ-03-009-B-R-029	Kartik Rajubhai Sharma	Male	sharmakartik191000@gmail.com	Feb-2021	June-2021
27	U-18-GJ-03-009-B-R-030	Shruti Rajesh Singh	Female	fatzydwarf@gmail.com	Feb-2021	June-2021
28	U-18-GJ-03-009-B-R-031	JagrutiSureshbhaiSondarva	Female	sondarvajagruti241@gmail.com	Feb-2021	June-2021
29	I-18-GJ-03-009-B-R-005	Sujith P. P.	Male	sujithpp111@gmail.com	Feb-2021	June-2021
30	I-18-GJ-	Suruchi Kumari	Female	suruchi13sep@gmail.	Feb-2021	June-2021

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31	U-18-GJ-03-009-B-R-032	Shefali Bhikhabhai Tandel	Female	shefalitandel1@gmail.com	Feb-2021	June-2021
32	U-18-GJ-03-009-B-R-033	DivyeshVirbhadrasinh Thakor	Male	divyeshsinhthakor999@gmail.com	Feb-2021	June-2021
33	U-18-GJ-03-009-B-R-034	Doli Madanbhai Vaishnav	Female	dollyvaishnav1811@gmail.com	Feb-2021	June-2021
34	U-18-GJ-03-009-B-R-035	Abhay Ashokbhai Vala	Male	valaabhay501@gmail.com	Feb-2021	June-2021
35	U-18-GJ-03-009-B-R-036	Nishaben Kotesingbhai Vasava	Female	nishavasava2412@gmail.com	Feb-2021	June-2021
36	U-18-GJ-03-009-B-R-037	Brayan Gopalbhai Vekariya	Male	brayanvekariya1906bs@gmail.com	Feb-2021	June-2021
37	I-18-GJ-03-009-B-R-007	Vislavath Suresh	Male	sureshvislavath003@gmail.com	Feb-2021	June-2021