

<b>Title of course- Skilled Beekeeper</b>	
Nodal Department of HEI to run course	
Broad Area/Sector-	Agriculture and Allied
Sub Sector-	Economic Agriculture Entomology
Nature of course - Independent / Progressive	Independent
Name of suggestive Sector Skill Council	Agriculture Skill Council of India
Aliened NSQF level	Level 4
Expected fees of the course –Free/Paid	
Stipend to student expected from industry	
Number of Seats-.....	
Course Code-.....	Credits- 03 (1 Theory, 2 Practical)
Max Marks...100..... Minimum Marks.....	
Name of proposed skill Partner	
Job prospects-Expected Fields of Occupation where student will be able to get job after completing this course in	Beekeeper: The bee-keeper manages colonies of bees in order to harvest honey and other Bee related by-products (Wax, Pollen, Propolish, Royal Jelly, Bee venom etc). His responsibilities include nurturing the bees to sell the raw and finished products in the market.

### Syllabus

Unit	Topics	General/ Skill component	Theory/ Practical/ OJT/ Internship/ Training	No of theory hours (Total-15 Hours=1 credit)	No of skill Hours (Total-60 Hours=2 credits)
<b>I</b>	<b>Bee keeping- Present Scenario</b>	Understand the role of a Beekeeper and the progression pathway • Get acquainted with the role of bees in Pollination of crops and their importance in increasing crop productivity	<ul style="list-style-type: none"> <li>Requirements of commercial bee keeping</li> <li>Pit fails in bee keeping.</li> </ul>	<b>1 hour</b>	<b>2 hour</b>
<b>II</b>	<b>Honey bee and Honey</b>	Identify different types of bees - Different species of bees - Life span of different bees - Different roles played by different types of honey bee - Different castes of bees and their role in colony <ul style="list-style-type: none"> <li>Familiarize with the life cycle of different types of bees</li> <li>Get acquainted with the communication method used by bees</li> </ul>	<ul style="list-style-type: none"> <li>Description and demonstration of use of different boxes</li> <li>Cleaning of boxes</li> <li>Other tools in bee keeping</li> </ul>	<b>3 hour</b>	<b>3 hour</b>
<b>III</b>	<b>Identification of flora and location of sites and tools</b>	Understand the difference between traditional and modern bee-keeping systems <ul style="list-style-type: none"> <li>Familiarize with the bee-keeping system</li> <li>Identify the tools/equipments required for the bee keeping</li> </ul> Understand the factors to be considered for site selection <ul style="list-style-type: none"> <li>Select site for hive installation</li> <li>Install hives</li> <li>Manage the Colonies of Bee</li> <li>Perform the inspection of Colonies</li> <li>Register and Insure bee-keeping unit</li> <li>Maintain record</li> <li>Study the migration of bee colonies</li> </ul>	<ul style="list-style-type: none"> <li>Building of comb and colony</li> <li>Division of colony</li> <li>Raw produce generated by different life stages of bees</li> <li>Effect of nectar and pollen properties on honey production</li> <li>Colony management during honey flow and dearth period</li> </ul>	<b>6 hour</b>	<b>25 hour</b>
<b>IV</b>	<b>Managing insects and diseases</b>	Identify different types of insects infesting beehive <ul style="list-style-type: none"> <li>Understand the characteristics of different insects</li> <li>Practice the preventive measures/ insect management</li> <li>Identify the different types of tools/equipment required for insect management</li> </ul>	<ul style="list-style-type: none"> <li>Common pests that attack honey bees and hives</li> <li>Management of nuisance and bee hives</li> </ul>	<b>3 hour</b>	<b>20 hours</b>

		<ul style="list-style-type: none"> <li>• Identify common diseases of bee</li> <li>• Practice the disease preventive measures/ disease management</li> <li>• Identify different types of tools/equipments required for disease management</li> <li>• Study the colony collapse disorder</li> <li>• Familiarize with pesticide poisoning of bees</li> <li>• Undertake preventive measures to avoid pesticide poisoning</li> </ul>			
<b>V</b>	<b>Harvesting, Processing, preservation of honey, costing, pricing, packaging and Marketing of honey</b>	<p>Get well versed with the important factors to be considered during harvesting:</p> <ul style="list-style-type: none"> <li>- Time of Harvesting</li> <li>- Method of harvesting</li> <li>- Identify and use the tools/equipment required for harvesting</li> <li>• Extract honey using appropriate procedure</li> <li>• Identify, select and use the tools required for the process</li> <li>• Grade the produce</li> <li>• Assess the quality of the produce</li> <li>• Understand the shelf-life of the produce</li> <li>• Select the materials required for packaging and storage of the produce</li> <li>• Practice proper packaging and storage of the processed honey</li> <li>• Harvest Royal Jelly, Propolis, Pollen and Bee venom</li> <li>• Undertake processing, labelling and storage of Royal Jelly, Propolis, Pollen and Bee venom</li> <li>• Undertake mass queen rearing</li> <li>• Identify the market platform for the products and by products</li> </ul> <p>Build up the supply chain</p> <ul style="list-style-type: none"> <li>• Market the produce</li> </ul>	<ul style="list-style-type: none"> <li>• Methods of harvesting honey</li> <li>• Processing of honey</li> <li>• Preservation of honey</li> <li>• Methodologies adopted for costing and pricing</li> <li>• Packaging and labelling and branding</li> <li>• Marketing management</li> </ul>	<b>2 hours</b>	<b>10 hours</b>

**Suggested Readings:**

- NPCS Board Of Consultants & Engineers, The Complete Book On Beekeeping And Honey Processing, NIIR Project Consultancy Services, India, 2015, 2nd Revised Edition ISBN: 9788190568555 Pages: 544
- Sathe, T. V.; Fundamental of Beekeeping, Daya Publishing House, ISBN-10 X817035420 : , ISBN-13 -978 : pages 109 ,2007 ,8170354208
- Michael Bush, The Practical Beekeeper Volume I, II & III Beekeeping Naturally, X-STAR PUBLISHING COMPANY, 2011, 674, ISBN: 9781614760641

**Suggested Digital platforms/ web links for reading-: N.A.**

**Suggested OJT/ Internship/ Training/ Skill partner: N.A.**

**Suggested Continuous Evaluation Methods: Course Examination/test/quiz**

**Course Pre-requisites:**

- No pre-requisite required, open to all
- To study this course, a student must have the subject ..... in class/12<sup>th</sup>/ certificate/diploma
- If progressive, to study this course a student must have passed previous courses of this series.

**Suggested equivalent online courses: N.A.**

**Any remarks/ suggestions: N.A.**

**Notes:**

- Number of units in Theory/Practical may vary as per need
- Total credits/semester-3 (it can be more credits, but students will get only 3credit/ semester or 6credits/ year)
- Credits for Theory =01 (Teaching Hours = 15)
- Credits for Internship/OJT/Training/Practical = 02 (Training Hours = 60)