

### Syllabus on Vocational Education and Training Course (VTC)

<b>Paper Title</b>	<b>: Piggery -I</b>							
<b>CODE</b>	<b>:VTC: 240.4.</b>							
<b>Number of Credits</b>	<b>: 4</b>							
<b>Semester</b>	<b>: III</b>							
<b>No. of Theory Hours Per Week</b>	<b>: One (1 hour)</b>							
<b>No. of Practical Hours per Week</b>	<b>:Three (3 Hours)</b>							
<b>Outline of the Paper:</b>								
<b>Type of Course</b>	<b>Units in the VTC</b>	<b>Hours</b>	<b>Credits</b>	<b>Total Marks</b>	<b>Distribution of Marks (as per OC-8)</b>			
<b>Piggery-I</b>					<b>In-Semester</b>		<b>End-Semester</b>	
					<b>Theory</b>	<b>Practical</b>	<b>Theory</b>	<b>Practical</b>
	<b>Unit-I Theory (25 Marks)</b>	<b>15</b>			<b>25</b>			
	<b>Unit-II to IV Theory (75 Marks)</b>	<b>90</b>	<b>4</b>	<b>100</b>		<b>15</b>		<b>60</b>
<b>Marks Distribution</b>	<b>: Internal Assessment: 40</b> <b>: External Assessment: 60</b>							
<b>Course Objectives</b>	<ol style="list-style-type: none"> <li>1. Provide students with opportunities to understand the basics of pig farming and its related technology.</li> </ol>							
<b>Course Learning Outcome</b>	<p>At the end of the course students will able to:</p> <ol style="list-style-type: none"> <li>1. explain the basic concepts of piggery</li> <li>2. draw the organization chart of piggery</li> <li>3. explain the different Indigenous and Exotic breeds of pigs</li> <li>4. develop a small-scale piggery unit</li> <li>5. choose the housing requirement of piggery</li> <li>6. describe the process for scientific care and management of pig farming</li> </ol>							
<b>Unit I: (Theory) 15 Hours</b>	<ul style="list-style-type: none"> <li>• Introduction and scope of swine production in India with special reference to NorthEastern region. Zoological Classification of pigs.</li> <li>• Common terms in relation to pig husbandry. Swine population, Indian and exotic breeds of swine, distribution of swine. Advantages of swine production. Economic traits of swine.</li> <li>• Care and management of breeding boars, gilt/ sows, care at mating. Care and management of pregnant sows/gilts, care at farrowing. Care and management of lactation sows and litters. Care and Management of piglets, colostrum feeding, creep feeding, weaning. Care of growing and finishing swine.</li> </ul>							
<b>UNIT-II: (Practical) 30 Hours</b>	<ul style="list-style-type: none"> <li>• Care and handling of different categories of pigs</li> <li>• Identification of different body parts of pigs</li> <li>• Study about taking data on body weight, temperature,</li> </ul>							

	<p>pulse rate and respiration rate of pigs.</p> <ul style="list-style-type: none"> <li>• Basics of pig housing.</li> <li>• Study on suitable sty design for pig farming.</li> </ul>
<b>UNIT-III: (Practical)</b> <b>30 Hours</b>	<ul style="list-style-type: none"> <li>• Identification of different indigenous and exotic breeds of pigs.</li> <li>• Study about the economic traits of swine</li> <li>• Visit to pig farm and familiarize with various categories of pigs.</li> <li>• Visit to local slaughterhouses and collection of data</li> <li>• Visit local and improved farmers house and study the existing practices of pig farming.</li> </ul>
<b>UNIT-IV: (Practical)</b> <b>30 Hours</b>	<ol style="list-style-type: none"> <li>1. Scientific Care and Management of Piggery <ol style="list-style-type: none"> <li>i. Care of the Sow and litter at farrowing time.</li> <li>ii. Disinfection of pregnant Sow.</li> <li>iii. Bedding of farrowing Pen.</li> <li>iv. Care of the litters during the first 8 weeks.</li> <li>v. Needle Teeth Cutting.</li> <li>vi. Creep Feeding and weaning.</li> </ol> </li> </ol>
<b>Suggested Readings</b>	<ol style="list-style-type: none"> <li>1. A Textbook of Animal Husbandry (2015), OXFORD &amp; IBH Publishing Co. Pvt. Ltd. New Delhi.</li> <li>2. Chauhan et al. 2024. Swine Production and Management: A Practical Manual. Satish Serial Pub. House, New Delhi.</li> <li>3. Handbook of Animal Husbandry Published by Indian Council of Agricultural Research, New Delhi.</li> <li>4. Handbook on Pig Farming and Pork Processing (2018) (Feeding Management, Breeding, Housing Management, Sausages, Bacon, Cooked Ham with Packaging) 2nd Revised Edition.</li> <li>5. Pig Farming Published Director ICAR-Agricultural Technology Application Research Institute Zone-I, PAU Campus, Ludhiana-141004 0161-2401018, 2401092 Email: atari.ludhiana@icar.gov.in, zcu1ldh@gmail.com Website: <a href="http://www.atari1icar.res.in">www.atari1icar.res.in</a></li> </ol>
<b>Requirements</b>	<ul style="list-style-type: none"> <li>• <b>Classrooms and Laboratories:</b> Equipped with necessary teaching aids and practical tools.</li> <li>• <b>Pig Farms:</b> On-site farm for hands-on training.</li> <li>• <b>Veterinary Facilities:</b> For health management training.</li> <li>• <b>Market Linkages:</b> Exposure to market and processing facilities.</li> <li>• <b>Any other item as required</b></li> </ul>
<b>Qualified Instructors:</b>	Instructors with experience in Piggery Certifications or relevant qualifications in Piggery

<b>Paper Title</b>	<b>: Piggery-II</b>							
<b>CODE</b>	<b>: VTC: 260.4</b>							
<b>Number of Credits</b>	<b>: 4</b>							
<b>Semester</b>	<b>: IV</b>							
<b>No. of Theory Hours Per Week</b>	<b>: One (1 hour)</b>							
<b>No. of Practical Hours per Week</b>	<b>: Three (3 Hours)</b>							
<b>Outline of the Paper:</b>								
<b>Type of Course</b>	<b>Units in the VTC</b>	<b>Hours</b>	<b>Credits</b>	<b>Total Marks</b>	<b>Distribution of Marks (as per OC-8)</b>			
<b>Piggery-II</b>	<b>Unit-I Theory (25 Marks)</b>	<b>15</b>	<b>4</b>	<b>100</b>	<b>In-Semester</b>		<b>End-Semester</b>	
					<b>Theory</b>	<b>Practical</b>	<b>Theory</b>	<b>Practical</b>
	<b>Unit-II to IV Theory (75 Marks)</b>	<b>90</b>						<b>15</b>
<b>Marks Distribution</b>	<b>: Internal Assessment: 40</b> <b>: External Assessment: 60</b>							
<b>Course Objectives</b>	To impart students with knowledge on Piggery and acquaint them with the Scientific Breeding, Feeding, Housing, Slaughtering, Marketing and focusing on skill development to meet the demands from ongoing innovations in the field.							
<b>Course Learning Outcome</b>	After completion of the course students are able to: <ol style="list-style-type: none"> <li>1. demonstrate Scientific feeding techniques for pig farming</li> <li>2. Identify Scientific breeding techniques for pig farming</li> <li>3. develop Scientific housing management for pig farming</li> <li>4. maintenance and sanitation in pig farming.</li> <li>5. identify Symptoms of common diseases of pigs, their prevention and control.</li> <li>6. explore Marketing of pigs and pork.</li> <li>7. demonstrate different methods of slaughter.</li> </ol>							
<b>Unit I: (Theory) 15 Hours</b>	<ul style="list-style-type: none"> <li>• Selection of breeding, breeding boars and gilts. System of breeding.</li> <li>• Adverse effects of inbreeding. System of management of swine.</li> <li>• Feeding Pigs economically, creep feeding. Use of unconventional feed resources.</li> <li>• System of housing and housing requirement of swine. Slaughter and preservation of pork.</li> <li>• Marketing of different pig products in India and abroad. Common diseases of pigs, their prevention and control.</li> <li>• Use of herbal medicines for disease management.</li> </ul>							
<b>UNIT-II: (Practical) 30 Hours</b>	<ul style="list-style-type: none"> <li>• Selection of breeding stock.</li> <li>• System of breeding suitable for piggery</li> </ul>							

	<ul style="list-style-type: none"> <li>• Formulation of rations and feeding schedules for various classes of swine.</li> <li>• Feeding schedule for various classes of pigs.</li> <li>• Feed formulation for various classes of pigs.</li> </ul>
<b>UNIT-III: (Practical)</b> <b>30 Hours</b>	<ul style="list-style-type: none"> <li>• Pig production system.</li> <li>• Design of sty and its various components.</li> <li>• Construction of farrowing pen.</li> <li>• Housing system of pigs.</li> <li>• Hygiene and sanitation maintenance in the housing system</li> </ul>
<b>UNIT-IV: (Practical)</b> <b>30 Hours</b>	<ul style="list-style-type: none"> <li>• Bacterial diseases of pigs.</li> <li>• Viral diseases of pigs</li> <li>• Fungal diseases and nutritional deficiencies of pigs.</li> <li>• Methods of slaughter and marketing of pork.</li> </ul>
<b>Suggested Readings</b>	<ol style="list-style-type: none"> <li>1. A Textbook of Animal Husbandry (2015), OXFORD &amp; IBH Publishing Co. Pvt. Ltd. New Delhi.</li> <li>2. Chauhan et al. 2024. Swine Production and Management: A Practical Manual. Satish Serial Pub. House, New Delhi.</li> <li>3. Handbook of Animal Husbandry Published by Indian Council of Agricultural Research, New Delhi. Handbook on Pig Farming and Pork Processing (2018) (Feeding Management, Breeding, Housing Management, Sausages, Bacon, Cooked Ham with Packaging) 2nd Revised Edition.</li> <li>4. Pig Farming, Pub. ICAR-Agricultural Technology Application Research Institute Zone-I, PAU Campus, Ludhiana-141004 0161-2401018, 2401092 Email: atari.ludhiana@icar.gov.in, zcu1ldh@gmail.com Website: <a href="http://www.atari1icar.res.in">www.atari1icar.res.in</a></li> </ol>
<b>Requirements</b>	<ul style="list-style-type: none"> <li>• <b>Classrooms and Laboratories:</b> Equipped with necessary teaching aids and practical tools.</li> <li>• <b>Pig Farms:</b> On-site farm for hands-on training.</li> <li>• <b>Veterinary Facilities:</b> For health management training.</li> <li>• <b>Market Linkages:</b> Exposure to market and processing facilities.</li> <li>• <b>Any other item as required</b></li> </ul>
<b>Qualified Instructors</b>	<ul style="list-style-type: none"> <li>• Instructors with experience in Piggery</li> <li>• Certifications or relevant qualifications in Piggery</li> </ul>

<b>Paper Title</b>	<b>: Piggery-III</b>							
<b>CODE</b>	<b>:VTC: 360.4</b>							
<b>Number of Credits</b>	<b>: 4</b>							
<b>Semester</b>	<b>:VI</b>							
<b>No. of Theory Hours Per Week</b>	<b>: One (1 hour)</b>							
<b>No. of Practical Hours per Week</b>	<b>: Three (3 Hours)</b>							
<b>Outline of the Paper:</b>								
<b>Type of Course</b>	<b>Units in the VTC</b>	<b>Hours</b>	<b>Credits</b>	<b>Total Marks</b>	<b>Distribution of Marks (as per OC-8)</b>			
<b>Piggery-III</b>	<b>Unit-I Theory (25 Marks)</b>	<b>15</b>	<b>4</b>	<b>100</b>	<b>In-Semester</b>		<b>End-Semester</b>	
					<b>Theory</b>	<b>Practical</b>	<b>Theory</b>	<b>Practical</b>
	<b>Unit-II to IV Theory (75 Marks)</b>	<b>90</b>			<b>25</b>	<b>15</b>	<b>60</b>	
<b>Marks Distribution</b>	<b>: Internal Assessment: 40 : External Assessment: 60</b>							
<b>Course Objectives</b>	To impart basic and applied knowledge on value-added products from piggery and project formulation and funding opportunities in Pig farming.							
<b>Course Learning Outcome</b>	After completion of the course students are able to: <ol style="list-style-type: none"> <li>1. demonstrate the skills on piggery farming through various training</li> <li>2. choose funding schemes on pig farming</li> <li>3. prepare and present the proposals on pig farming</li> <li>4. prepare and present different value-added projects</li> <li>5. plan the Benefit-Cost ratio of pig farming</li> <li>6. plan Benefit-Cost ratio of value-added products from pork</li> </ol>							
<b>Unit I: (Theory) 15 Hours</b>	<ul style="list-style-type: none"> <li>• Entrepreneurship training programme and skill development programme on “Processing on value added pork products”.</li> <li>• Entrepreneurship Development Scheme under piggery, objectives, eligible beneficiaries, financial institutions eligible for finance and re-finance under various schemes.</li> <li>• Value added products from pork. Economics of pig farming. Use of ICT and artificial intelligence in pig husbandry.</li> </ul>							
<b>UNIT-II: (Practical) 30 Hours</b>	<ul style="list-style-type: none"> <li>• To learn the essential skills of pig farming, health management, and efficient farm management practices.</li> <li>• To attend various skill development training on pig farming</li> <li>• Maintenance of various record for pig farming</li> </ul>							

<b>UNIT-III: (Practical) 30 Hours</b>	<ul style="list-style-type: none"> <li>• Essentials of pig project formulation.</li> <li>• Preparation of model Piggery project for small, marginal, and landless farmers suiting to local condition and availability of market. and analysis of cost benefit ratio.</li> <li>• Estimation of benefit cost ratio in pig farming</li> </ul>
<b>UNIT-IV: (Practical) 30 Hours</b>	<ul style="list-style-type: none"> <li>• Visit to various financial agencies to know about funding on pig farming</li> <li>• Preparation of various value-added products of pork.</li> <li>• Cost benefit ration of value-added products.</li> </ul>
<b>Suggested Readings</b>	<ol style="list-style-type: none"> <li>1. A Textbook of Animal Husbandry (2015), OXFORD &amp; IBH Publishing Co. Pvt. Ltd. New Delhi.</li> <li>2. Chauhan et al. 2024. Swine Production and Management: A Practical Manual. Satish Serial Pub. House, New Delhi.</li> <li>3. Handbook of Animal Husbandry. Published by Indian Council of Agricultural Research, New Delhi.</li> <li>4. Handbook on Pig Farming and Pork Processing (2018) (Feeding Management, Breeding, Housing Management, Sausages, Bacon, Cooked Ham with Packaging) 2nd Revised Edition.</li> <li>5. Pig Farming. Published Director ICAR-Agricultural Technology Application Research Institute Zone-I, PAU Campus, Ludhiana-141004 0161-2401018, 2401092 Email: atari.ludhiana@icar.gov.in, zcu1ldh@gmail.com Website: <a href="http://www.atari.licar.res.in">www.atari.licar.res.in</a></li> </ol>
<b>Requirements</b>	<ul style="list-style-type: none"> <li>• <b>Classrooms and Laboratories:</b> Equipped with necessary teaching aids and practical tools.</li> <li>• <b>Pig Farms:</b> On-site farm for hands-on training.</li> <li>• <b>Veterinary Facilities:</b> For health management training.</li> <li>• <b>Market Linkages:</b> Exposure to market and processing facilities.</li> <li>• <b>Any other item as required</b></li> </ul>
<b>Qualified Instructors</b>	<ul style="list-style-type: none"> <li>• Instructors with experience in <b>Piggery</b></li> <li>• Certifications or relevant qualifications in <b>Piggery</b></li> </ul>