

Government of Pakistan

**National Vocational and Technical Training Commission**

**Prime Minister's Hunarmand Pakistan Program**

"Skills for All"



**Course Contents / Lesson Plan**

**Course Title:** Agriculture Farm Manager

**Duration:** 6 Months

**Revised Edition**

|                             |   |
|-----------------------------|---|
| Trainer Name                |   |
| Course Title                | <b>Agriculture Farm Manager</b>   |
| Objectives and Expectations | <p><b>Employable skills and hands-on practice for Agribusiness</b></p> <p>This course offers a broad, cross-disciplinary learning experience for students looking to pursue careers in <b>Agriculture Farm Manager</b> farm management, data analysis, leadership, marketing and sales, finance, accounting and business skill development. The course is designed to span a wide range of farm management platform.</p> <p>In this course, students are introduced to key aspects of the design farm management skills, from research/strategy, creative brief development, and campaign development to teamwork and presentation and content creation so that they can enter in the business of farm management as strong candidates for beginner to intermediate level design jobs.</p> <p><b><u>Main Expectations:</u></b></p> <p>In short, the course under reference should be delivered by professional instructors in such a robust hands-on manner that the trainees are comfortably able to employ their skills for earning money (through wage/self-employment) at its conclusion.</p> <p>This course thus clearly goes beyond the domain of the traditional training practices in vogue and underscores an expectation that a market-centric approach will be adopted as the main driving force while delivering it. The instructors should therefore be experienced enough to be able to identify the training needs for the possible market roles available out there. Moreover, they should also know the strengths and weaknesses of each trainee to prepare them for such market roles during/after the training.</p> <ol style="list-style-type: none"> <li>i. Specially designed practical tasks to be performed by the trainees have been included in the Annexure-I to this document. The record of all tasks performed individually or in groups must be preserved by the management of the training Institute clearly labeling name, trade, session, etc. so that these are ready to be physically inspected/verified through monitoring visits from time to time. The weekly distribution of tasks has also been indicated in the weekly lesson plan given in this document.</li> <li>ii. To materialize the main expectations, a special module on <b><u>Job Search &amp; Entrepreneurial Skills</u></b> has been included in the latter part of this course (5<sup>th</sup> &amp; 6<sup>th</sup> month) through which, the trainees will be made aware of the Job search techniques in the local as well as international job markets (Gulf countries). Awareness around the visa process and immigration laws of the most favored labor destination countries also form a part of this module. Moreover, the trainees would also be encouraged to venture into self-employment and exposed to the main requirements in this regard. It is also expected that a sense of civic duties/roles and responsibilities will also be inculcated in the trainees to make them responsible citizens of the country.</li> <li>iii. A module on <b>Work Place Ethics</b> has also been included to highlight the importance of good and positive behavior in the workplace in the</li> </ol> |

line with the best practices elsewhere in the world. An outline of such qualities has been given in the Appendix to this document. Its importance should be conveyed in a format that is attractive and interesting for the trainees such as through PPT slides +short video documentaries. Needless to say, that if the training provider puts his heart and soul into these otherwise non-technical components, the image of the Pakistani workforce would undergo a positive transformation in the local as well as international job markets.

To maintain interest and motivation of the trainees throughout the course, modern techniques such as:

- Motivational Lectures
- Success Stories
- Case Studies

These techniques would be employed as an additional training tool wherever possible (these are explained in the subsequent section on Training Methodology).

Lastly, evaluation of the competencies acquired by the trainees will be done objectively at various stages of the training and a proper record of the same will be maintained. Suffice to say that for such evaluations, practical tasks would be designed by the training providers to gauge the problem-solving abilities of the trainees.

#### **(i) Motivational Lectures**

The proposed methodology for the training under reference employs motivation as a tool. Hence besides the purely technical content, a trainer is required to include elements of motivation in his/her lecture. To inspire the trainees to utilize the training opportunity to the full and strive towards professional excellence. Motivational lectures may also include general topics such as the importance of moral values and civic role & responsibilities as a Pakistani. A motivational lecture should be delivered with enough zeal to produce a deep impact on the trainees. It may comprise of the following:

- Clear Purpose to convey the message to trainees effectively.
- Personal Story to quote as an example to follow.
- Trainees Fit so that the situation is actionable by trainees and not represent a just idealism.
- Ending Points to persuade the trainees on changing themselves.

A good motivational lecture should help drive creativity, curiosity, and spark the desire needed for trainees to want to learn more.

The impact of a successful motivational strategy is amongst others commonly visible in increased class participation ratios. It increases the trainees' willingness to be engaged on the practical tasks for a longer time without boredom and loss of interest because they can see in their mind's eye where their hard work would take them in short (1-3 years); medium (3 -10 years) and long term (more than 10 years).

As this tool is expected that the training providers would make arrangements for regular well planned motivational lectures as part of a coordinated strategy interspersed throughout the training period as suggested in the weekly lesson plans in this document.

Course-related motivational lectures online link is available in **Annexure-II.**

### **(ii) Success Stories**

Another effective way of motivating the trainees is using Success Stories. Its inclusion in the weekly lesson plan at regular intervals has been recommended till the end of the training.

A success story may be disseminated orally, through a presentation, or using a video/documentary of someone that has risen to fortune, acclaim, or brilliant achievement. A success story shows how a person achieved his goal through hard work, dedication, and devotion. An inspiring success story contains compelling and significant facts articulated clearly and easily comprehensible words. Moreover, it is helpful if it is assumed that the reader/listener knows nothing of what is being revealed. The optimum impact is created when the story is revealed in the form of: -

- Directly in person (At least 2-3 cases must be arranged by the training institute)
- Through an audio/ videotaped message (2-3 high-quality videos must be arranged by the training institute)

It is expected that the training provider would collect relevant high-quality success stories for inclusion in the training as suggested in the weekly lesson plan given in this document.

Suggestive structure and sequence of a sample success story and its various shapes can be seen in **Annexure III**.

### **(iii) Case Studies**

Where a situation allows, case studies can also be presented to the trainees to widen their understanding of the real-life specific problem/situation and to explore the solutions.

In simple terms, the case study method of teaching uses a real-life case example/a typical case to demonstrate a phenomenon in action and explain theoretical as well as practical aspects of the knowledge related to the same. It is an effective way to help the trainees comprehend in depth both the theoretical and practical aspects of the complex phenomenon in depth with ease. Case teaching can also stimulate the trainees to participate in discussions and thereby boost their confidence. It also makes the classroom atmosphere interesting thus maintaining the trainee interest in training till the end of the course.

Depending on suitability to the trade, the weekly lesson plan in this document may suggest case studies be presented to the trainees. The trainer may adopt a PowerPoint presentation or video format for such case studies whichever is deemed suitable but only those cases must be selected that are relevant and of a learning value.

The Trainees should be required and supervised to carefully analyze the cases.

For this purpose, they must be encouraged to inquire and collect specific information/data, actively participate in the discussions, and intended solutions to the problem/situation.

Case studies can be implemented in the following ways: -

- i. A good quality trade-specific documentary (At least 2-3 documentaries must be arranged by the training institute)
- ii. Health & Safety case studies (2 cases regarding safety and industrial accidents must be arranged by the training institute)

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|  | iii. Field visits (At least one visit to a trade-specific major industry/ site must be arranged by the training institute)   |
| <b>Entry-level of trainees</b>         | Intermediate   |
| <b>Learning Outcomes of the course</b> | <p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> <li>• Students will demonstrate the ability to analyze data and draw appropriate statistical conclusions.</li> <li>• Students will demonstrate the ability to communicate effectively both orally and in writing.</li> <li>• Students will demonstrate knowledge of the legal and ethical environment impacting agriculture organizations and exhibit an understanding and appreciation of the ethical implications of decisions.</li> <li>• Students will demonstrate an understanding of and appreciation for the importance of the impact of globalization and diversity in modern agriculture organizations.</li> <li>• Students will demonstrate an ability to engage in critical thinking by analyzing situations and constructing and selecting viable solutions to solve problems.</li> <li>• Students will demonstrate an ability to work effectively with others.</li> <li>• Students will understand and analyze the current events and issues that are occurring in agriculture and how they affect the future of agriculture.</li> <li>• Students will be able to recognize and examine the relationships between inputs and outputs in their agricultural field to make effective and profitable decisions.</li> <li>• Students will be able to effectively evaluate the impact of trade policy, common markets, trading blocks, market instability, commodity problems, trade agreements and environmental regulations on imports and exports in international trade to be able to improve production decision making.</li> <li>• Students will understand how all aspects of agriculture combine and are used by scientists, marketers, and producers.</li> <li>• Students will understand how employer characteristics and decision-making at various levels enhance the success of an agricultural enterprise.</li> </ul> |
| <b>Course Execution Plan</b>           | <p>The total duration of the course: <b>6 months (26 Weeks)</b><br/> Class hours: <b>4 hours per day</b><br/> Theory: <b>20%</b><br/> Practical: <b>80%</b><br/> Weekly hours: <b>20 hours per week</b><br/> Total contact hours: <b>520hours</b></p>  |

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| <b>Companies offering jobs in the respective trade</b> | <ol style="list-style-type: none"> <li>1. Ali Akbar Farms</li> <li>2. Evyol group Farms</li> <li>3. Chaudhry Maher Din Farms</li> <li>4. Gauva Research Farms</li> <li>5. Citrus Research Farms</li> </ol>  |
| <b>Job Opportunities</b>                               | <p><b>Agriculture</b> professionals are not just farmers and ranchers. <b>Opportunities</b> in this field include areas as diverse as science, engineering, finance, marketing, and exporting. <b>Careers</b> in these areas have expanded as the production and processing of food and fiber have become more specialized and technological.:</p> <ul style="list-style-type: none"> <li>• Biochemist.</li> <li>• Environmental technician.</li> <li>• Bioinformatics Scientist.</li> <li>• Agronomy Sales Manager.</li> <li>• Farm Mechanics Technician.</li> <li>• Food Scientist.</li> <li>• Animal breeder.</li> <li>• Agricultural <b>Operations Manager</b></li> </ul>   |
| <b>No of Students</b>                                  | 25  |
| <b>Learning Place</b>                                  | Classroom / Lab   |
| <b>Instructional Resources</b>                         | <p><a href="https://www.youtube.com/watch?v=_TwBclP1Yd8&amp;ab_channel=loginAgri">https://www.youtube.com/watch?v=_TwBclP1Yd8&amp;ab_channel=loginAgri</a><br/>introduction to agriculture farm management</p> <p><a href="https://www.youtube.com/watch?v=Yocja_N5s1I">https://www.youtube.com/watch?v=Yocja_N5s1I</a><br/>Agriculture Revolution</p> <p><a href="https://www.youtube.com/watch?v=2H9bPswF0Ts&amp;ab_channel=ApexStudies">https://www.youtube.com/watch?v=2H9bPswF0Ts&amp;ab_channel=ApexStudies</a><br/>Farm management</p> <p><a href="https://www.youtube.com/watch?v=HgwZR3jsylo&amp;ab_channel=WaterManagement">https://www.youtube.com/watch?v=HgwZR3jsylo&amp;ab_channel=WaterManagement</a><br/>Future of Farm management</p> <p><a href="https://www.youtube.com/watch?v=UZwbZwWWjLI&amp;ab_channel=IRFARM">https://www.youtube.com/watch?v=UZwbZwWWjLI&amp;ab_channel=IRFARM</a><br/>innovation for Farm management</p> <p><a href="https://www.youtube.com/watch?v=HgwZR3jsylo&amp;t=48s&amp;ab_channel=WaterManagement">https://www.youtube.com/watch?v=HgwZR3jsylo&amp;t=48s&amp;ab_channel=WaterManagement</a><br/>Farm management department</p> <p><a href="https://www.youtube.com/watch?v=KRSGtnk6plc&amp;ab_channel=BakhabarKisan">https://www.youtube.com/watch?v=KRSGtnk6plc&amp;ab_channel=BakhabarKisan</a><br/>how to adopt farm management as profitable business?</p> <p><a href="https://www.youtube.com/watch?v=rQEHBi6MoTc&amp;ab_channel=AzadChaiwala">https://www.youtube.com/watch?v=rQEHBi6MoTc&amp;ab_channel=AzadChaiwala</a><br/>Farm management marketing</p> |

## MODULES

| Schedule Week | Module Title   | Learning Units   | Remarks  |
|---------------|--|--|--|
| <b>Week 1</b> | <ul style="list-style-type: none"> <li>➤ Introduction</li> <li>➤ Motivational Lecture<br/>(For further detail please see Page No: 4 &amp; 5)</li> </ul>                          | <ul style="list-style-type: none"> <li>• Course Introduction</li> <li>• Success stories</li> <li>• Job market</li> <li>• Course Applications</li> <li>• Institute/work ethics</li> <li>• Introduction to Agriculture</li> <li>• Agriculture Business</li> <li>• Role of Agriculture in the Economic Development of a country</li> <li>• Importance of Agriculture in Pakistan Economy</li> <li>• Role and importance of Agriculture</li> <li>• Contribution to National Income</li> <li>• Source of Food Supply</li> </ul> | <p style="text-align: center;"><b>Home Assignment</b></p> <ul style="list-style-type: none"> <li>• Task 1</li> <li>• Task 2</li> <li>• Task 3</li> </ul> <p style="text-align: center;"><i><u>Details may be seen at Annexure -I</u></i></p> |
| <b>Week 2</b> | <p><b>INTRODUCTION TO A SOIL MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</li> </ul>         | <ul style="list-style-type: none"> <li>• Have good knowledge of soils and their types</li> <li>• Sandy Soils.</li> <li>• Clayey/ heavy soils.</li> <li>• Loam/ Productive soils.</li> <li>• Less productive/Poor soils</li> <li>• Alter soil properties for keeping soil productive</li> <li>• Bulk density.</li> <li>• ph.</li> <li>• EC.</li> <li>• Organic matter</li> <li>• Water holding capacity</li> </ul>  | <ul style="list-style-type: none"> <li>• Task 4</li> <li>• Task 5</li> </ul> <p style="text-align: center;"><i><u>Details may be seen at Annexure -I</u></i></p>   |
| <b>Week 3</b> | <p><b>INTRODUCTION TO GDP IN AGRICULTURE</b></p> <ul style="list-style-type: none"> <li>➤ Motivational Lecture<br/>(For further detail please see Page No: 4 &amp; 5)</li> </ul> | <ul style="list-style-type: none"> <li>• Aeration.</li> <li>• Good microbial community</li> <li>• Well Drained</li> </ul>  | <ul style="list-style-type: none"> <li>• Task 6</li> <li>• Task 7</li> <li>• Task 8</li> </ul> <p style="text-align: center;"><i><u>Details may be</u></i></p>   |

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|               |  | <ul style="list-style-type: none"> <li>• Managing optimum level of essential nutrients and ensure their availability</li> <li>• Macronutrients</li> <li>• Secondary nutrients</li> <li>• Micronutrients</li> <li>• Roles of nutrients in biomass and grain production/ disease control and quality of produce</li> <li>•</li> </ul>  | <u>seen at Annexure -I</u>   |
| <b>Week 4</b> | <p>INTRODUCTION TO SOIL TYPES</p> <p>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</p>          | <ul style="list-style-type: none"> <li>• Soil organic matter (SOM) and its importance/ role in crop production.</li> <li>• Definition and Origin</li> <li>• Quantity/ distribution</li> <li>• Role in nutrient availability</li> <li>• Physical properties</li> <li>• Biological properties</li> <li>• Productivity of soil</li> <li>• Knowledge of various kind of fertilizers and their nutrient contents</li> <li>• Nitrogen fertilizers</li> <li>• Phosphatic fertilizers</li> <li>• Micronutrient fertilizers</li> <li>• Compound fertilizers</li> <li>• Organic manures</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Task 9</b></li> <li>• <b>Task 10</b></li> <li>• <b>1<sup>ST</sup> monthly test</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |
| <b>Week 5</b> | <p>INTRODUCTION TO SOIL TEXTURE</p> <p>➤ Motivational Lecture<br/>(For further detail please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Problem soils (salt-affected, water-logged, heavy metal polluted) and their management</li> <li>• Salt affected/ saline soils</li> <li>• Sodic/ water-logged soils</li> <li>• Saline sodic soils</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Task 11</b></li> <li>• <b>Task 12</b></li> <li>• <b>Task 13</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p>                    |



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|               |  | <ul style="list-style-type: none"> <li>• Calcareous soils</li> <li>• Alkaline soils</li> <li>• Acid soils</li> <li>• Heavy metal (Pb, Cr, Hg polluted) soils</li> <li>• Soil conservation (Terracing in hilly areas and across slope cultivation in slight slope areas)</li> <li>• Water erosion and its control</li> <li>• Wind erosion and its control</li> </ul>   |   |
| <b>Week 6</b> | <p>FIELD CROP PRODUCTION</p> <p>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</p>               | <ul style="list-style-type: none"> <li>• Knowing various kinds of field crops</li> <li>• Cereal crops.</li> <li>• Legume crops.</li> <li>• Cotton &amp; sugarcane</li> <li>• Other field crops</li> <li>• Crops/ cropping patterns. systems suitable for various kinds of soils and</li> <li>• Suitability of crops/ cropping pattern to kinds of soil</li> <li>• Cropping patterns in various ecological zones</li> <li>• Economics of various cropping patterns/ systems</li> <li>• Knowledge of proper cropping seasons of various crops</li> <li>• Sowing/ harvesting seasons of various crops.</li> <li>• Effects of early/ late planting on crop yields</li> <li>•</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Task 14</b></li> <li>• <b>Task 15</b></li> <li>• <b>Task 16</b></li> <li>• <b>Task 17</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |
| <b>Week 7</b> | <p>PRINCIPLES FOR HIGH YEILD</p> <p>➤ Motivational Lecture</p> <p>(For further detail please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Manage good land preparation using proper tillage techniques for various kinds of soils and crops</li> <li>• Simples Cultivators</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Task 18</b></li> <li>• <b>Task 19</b></li> <li>• <b>Task 20</b></li> </ul> <p><u>Details may be</u></p>   |

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|               |  | <ul style="list-style-type: none"> <li>• Chisel plow</li> <li>• Mouldboard/ rotavator.</li> <li>• Ridges/ Raised-bed preparation.</li> <li>• Puddling for rice sowing</li> <li>• Arrange proper crop rotations/ inter/ mix cropping</li> <li>• Various crop rotations</li> <li>• Cropping patterns</li> <li>• Mix/ inter-cropping</li> <li>• Selection of high yielding varieties/ importance of quality seed</li> <li>• High yielding/ disease resisting varieties of various crops.</li> <li>• Healthy seed selection</li> <li>• Seed cleaning to avoid germination of weeds, etc.</li> </ul> | <u>seen at Annexure -I</u>  |
| <b>Week 8</b> | <p>COMPONENTS OF FARM MANAGEMENT</p> <p>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</p> | <p>Know proper fertilizer recommendation, them calculations &amp; application</p> <ul style="list-style-type: none"> <li>• Fertilizer recommendation for various yield potentials of cereal crops</li> <li>• Recommendation for legume crops</li> <li>• Calculation based on yield potential and soil type</li> <li>• Weed management, disease/ pest control,</li> <li>• Weed management techniques (Physical or chemical</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Task 21</b></li> <li>• <b>Task 22</b></li> <li>• <b>Task 23</b></li> <li>• <b>2<sup>nd</sup> monthly test</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |

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|  |  | <ul style="list-style-type: none"><li>• Kinds of weedicide/ pesticide for respective</li></ul> |  |
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|                |   | <ul style="list-style-type: none"> <li>• Organic farming</li> <li>• Basics of organic farming</li> <li>• Its suitability for certain soils/ crops</li> <li>• Yield/ Quality aspect</li> <li>• Harvesting technologies &amp; storage methods</li> <li>• Machinery for harvesting for various crops</li> <li>• Benefits of machines</li> <li>• Proper storage method/ techniques</li> </ul>  |   |
| <b>Week 9</b>  | <p>WATER MANAGEMENT FOR CROPS</p> <p>➤ Motivational Lecture<br/>(For further detail, please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Importance of water</li> <li>• Role of water</li> <li>• Nutrient uptake</li> <li>• Transportation of nutrients/ photosynthate within plant</li> <li>• General plant growth and development</li> <li>• Water requirements for various crops</li> </ul> <p>Water requirement for:</p> <ul style="list-style-type: none"> <li>• Cereals except rice</li> <li>• Rice</li> <li>• Sugarcane</li> <li>• Fodder</li> <li>• Vegetables</li> <li>• Fruits</li> <li>• Various irrigation types/systems (Furrows/Basin Irrigation)</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Task 24</b></li> <li>• <b>Task 25</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |
| <b>Week 10</b> | <p>IRRIGATION PRACTICES</p> <p>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</p>               | <ul style="list-style-type: none"> <li>• Flood irrigation</li> <li>• Furrow &amp; Basin irrigation</li> <li>• Raised bed irrigation</li> <li>• Sprinkler irrigation</li> <li>• Drip irrigation</li> <li>• Climate/ weather forecasting</li> <li>• Watching/ listening weather forecast on electronic media</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Task 26</b></li> <li>• <b>Task 27</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |

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|                |   | <ul style="list-style-type: none"> <li>• Adjustment of irrigation according to forecast</li> <li>• Manage water harvesting/ Watershed management</li> <li>• Cultivation across the slop to catch surface runoff</li> </ul>  |  |
| <b>Week 11</b> | <p>IRRIGATION PRACTICES FOR NORTHERN AREAS</p> <p>➤ Motivational Lecture<br/>(For further detail please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Terracing in hilly areas</li> <li>• Plowing of fallow land to absorb rain water</li> <li>• Storage (in ponds)/ harvesting of water in sloped hilly areas and (Rodekahi systems)</li> <li>• Managing high efficiency irrigation systems</li> <li>• Sprinkler irrigation</li> <li>• Drip Irrigation</li> <li>• Solar pumps and irrigation</li> <li>• Maintenance of pumps/ tube wells</li> </ul>   | <p>• <b>Task 28</b></p> <p><u>Details may be seen at Annexure -I</u></p>                         |
| <b>Week 12</b> | <p>IRRIGATION EQUIPMENTS</p> <p>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</p>                          | <p>Tuning/ maintenance of</p> <ul style="list-style-type: none"> <li>• Pumps and</li> <li>• Tube wells to save energy and get maximum water</li> <li>• Water budgeting</li> <li>• Estimation of total water availability per year</li> <li>• Growing type and number of crops according to water availability</li> <li>• Water course management &amp; other water saving techniques/their application</li> </ul> <p>Losses of various:</p> <ul style="list-style-type: none"> <li>• Citrus fruits</li> <li>• Mangoes</li> <li>• Dates</li> <li>• Other fruits</li> <li>• Losses during collection/ picking or transportation</li> <li>• Measures to avoid/ or minimize post-harvest losses of all crops</li> </ul> | <p>• <b>Task 29</b></p> <p>• <b>Task 30</b></p> <p><u>Details may be seen at Annexure -I</u></p> |

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|                |   | <ul style="list-style-type: none"> <li>• Timely harvest</li> </ul>  |  |
|                | <b>Build your CV</b>  | Download professional CV template from any good site<br>( <a href="https://www.coolfreecv.com">https://www.coolfreecv.com</a> or relevant) <ul style="list-style-type: none"> <li>• Add Personal Information</li> <li>• Add Educational details</li> <li>• Add Experience/Portfolio</li> <li>• Add contact details/profile links</li> <li>•</li> </ul>  |  |
| <b>Week 13</b> | Mid-Term Assignment/Exam  |   |  |
| <b>Week 14</b> | <b>HARVESTING TECHNOLOGY</b><br>➤ Motivational Lecture<br><i>(For further detail please see Page No: 4 &amp; 5)</i> | <ul style="list-style-type: none"> <li>• Proper harvesting/ threshing procedure/ implements</li> <li>• Proper harvesting/ picking of vegetables and transportation to markets</li> <li>• Proper collection/ packing of fruit</li> <li>• Proper processing of ways</li> <li>• Cleaning of water courses</li> <li>• Precision land leveling</li> <li>• Dividing land into standard/ small pieces</li> <li>• Drip/ sprinkler systems</li> <li>• Water use efficiency of crops for optimum water productivity.</li> <li>• Applying water at right times</li> <li>• Growing crops with less water requirement</li> <li>• Water productivity i.e., quantity of grain/ biomass production per unit quantity water</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Task 31</b></li> </ul> <p><i><u>Details may be seen at Annexure -I</u></i></p> |

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| <p><b>Week 15</b></p> | <p>POST-HARVEST<br/> ➤ Success Story</p> <p><i>(For further detail<br/> please see Page<br/> No: 4 &amp; 5)</i></p> | <ul style="list-style-type: none"> <li>• Types and causes of postharvest losses</li> <li>• Losses of field crops</li> <li>• Losses of vegetable crops</li> <li>• Losses of fruits</li> <li>• Assessments of losses for various field crops and their economic values</li> </ul> | <p>• <b>Task 32</b></p> <p><u>Details may be seen at Annexure -I</u></p> |
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|                       |   | <p>Losses of various:</p> <ul style="list-style-type: none"> <li>• Cereal field crops</li> <li>• Legumes field crops</li> <li>• Cotton</li> <li>• sugarcane</li> <li>• Forages/ fodders</li> <li>• Assessment of post-harvest losses of various vegetable crop</li> </ul>   |   |
|                       | <p><b>Create an account profile on Fiverr (at least two gigs) and Upwork</b></p>                        | <p>Create an account by following these steps:<br/> Step 1: Personal Info<br/> Step 2: Professional Info<br/> Step 3: Linked Accounts<br/> Step 4: Account Security</p>   |   |
| <p><b>Week 16</b></p> | <p>Yield losses<br/> ➤ Motivational Lecture<br/> (For further detail please see Page No: 4 &amp; 5)</p> | <p>Losses of various:</p> <ul style="list-style-type: none"> <li>• Winter vegetable</li> <li>• Summer vegetables</li> <li>• Losses during collection/ transportation</li> <li>• Assessment of post-harvest losses of various fruit crops</li> <li>• Concept of proper storage of produce</li> <li>• Building proper storage according to harvest times of harvest and marketing trends/ prices</li> </ul> | <p>• <b>Task 33</b><br/> • <b>3<sup>rd</sup> monthly test</b></p> <p><i><u>Details may be seen at Annexure -I</u></i></p> |
| <p><b>Week 17</b></p> | <p><b>Create an account profile on Fiverr (at least two gigs) and Upwork</b></p>                        | <p>Create an account by following these steps:<br/> Step 1: Personal Info<br/> Step 2: Professional Info<br/> Step 3: Linked Accounts</p> <ul style="list-style-type: none"> <li>• Step 4: Account Security</li> </ul>  |   |



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|                | <p>STORAGE PRACTICES</p> <p>➤ Success story</p> <p><i>(For further detail please see Page No: 4 &amp; 5)</i></p> | <ul style="list-style-type: none"> <li>• Advantages of storage</li> <li>• Losses during storage and their control</li> <li>• Insect pests' losses and their control</li> <li>• Fungal and bacterial losses and their control</li> <li>• Fruit and vegetable preservation and their effects on nutritional value</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Task 34</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |
| <b>Week 18</b> | <p>STORAGE CONDITIONS</p> <p>➤ Motivational lecture</p> <p><i>(For further detail</i></p>                        | <ul style="list-style-type: none"> <li>• Proper harvest/ collection</li> <li>• Proper packing techniques</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Task 35</b></li> </ul>  |

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|                | <i>please see Page No: 4 &amp; 5)</i>  | <ul style="list-style-type: none"> <li>• Proper processing methods/ techniques to conserve nutrition</li> <li>• Adding proper preservatives</li> <li>• Storage of grains (methods, precautions and stored grain pest control), post- harvest losses and shelf life of different fruits</li> <li>• Proper storage</li> <li>• Proper aeration</li> <li>• Moisture control</li> </ul>   | <u>Details may be seen at Annexure -I</u>   |
| <b>Week 19</b> | <p>FUMIGATION OF STORAGE HOUSE</p> <p>➤ Success story (For further detail please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Fumigation</li> <li>• Sealing entries of insects/ pests</li> <li>• Occasional checkups/ observations for insects/ microbial disease attacks</li> <li>• Storage diseases/ insects/ pests and their control</li> <li>• Insects/pests</li> <li>• Bacterial diseases</li> <li>• Fungal diseases</li> <li>• Proper control measures for all these diseases/ problems</li> </ul>  | <ul style="list-style-type: none"> <li>• <b>Task 36</b></li> <li>• <b>Task 37</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p>   |
| <b>Week 20</b> | <p>PICKING METHODS</p> <p>➤ Motivational lecture (For further detail please see Page No: 4 &amp; 5)</p>      | <ul style="list-style-type: none"> <li>• Physiology and biochemistry of fruits and vegetables</li> <li>• Fruit/ grains bearing times</li> <li>• Stages of maximum nutrition/ water requirement</li> <li>• Ripening</li> <li>• Harvesting</li> <li>• Hand/ mechanical harvesting</li> <li>• Proper hand picking</li> <li>• Proper mechanical method <ul style="list-style-type: none"> <li>• Advantages/ economics of hand picking and mechanical harvesting</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• <b>Task 38</b></li> <li>• <b>Task 39</b></li> <li>• <b>4<sup>th</sup> monthly test</b></li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |

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| <p><b>Week 21</b></p> | <p>Employable Project/Assignment (6 weeks i.e., 21-26) in addition of regular classes.</p> <p style="text-align: center;"><b>OR</b></p> <p>On job training (2 weeks)</p> | <ul style="list-style-type: none"> <li>● Guidelines to the Trainees for selection of student's employable project like final year project (FYP)</li> <li>● Assign Independent project to each Trainee</li> <li>● A project based on trainee's aptitude and acquired skills.</li> <li>● Designed by keeping in view the emerging trends in the local market as well as across the globe.</li> <li>● The project idea may be based on Entrepreneur.</li> <li>● Leading to the successful employment.</li> <li>● The duration of the project will be 6 weeks</li> <li>● Ideas may be generated via different sites such as:<br/><br/> <a href="https://1000projects.org/">https://1000projects.org/</a><br/><br/> <a href="https://nevonprojects.com/">https://nevonprojects.com/</a><br/><br/> <a href="https://www.freestudentprojects.com/">https://www.freestudentprojects.com/</a><br/><br/> <a href="https://technofizi.net/best-computer-science-and-engineering-case-project-topics-ideas-for-students/">https://technofizi.net/best-computer-science-and-engineering-case-project-topics-ideas-for-students/</a> </li> <li>● Final viva/assessment will be conducted on project assignments.</li> <li>● At the end of session, the project will be presented in skills competition</li> <li>● The skill competition will be conducted on zonal, regional and National level.</li> <li>● The project will be presented in front of Industrialists for commercialization</li> <li>● The best business idea will be placed in NAVTTC business incubation center for commercialization.</li> </ul> | <ul style="list-style-type: none"> <li>● <b>Task 40</b></li> <li>● <b>Task 41</b></li> <li>● <b>Task 42</b></li> </ul> <p style="text-align: center;"><u>Details may be seen at Annexure -I</u></p> |
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|                |  | <p>-----<br/>-----</p> <p style="text-align: center;">OR</p> <p>On job training for 2 weeks:</p> <ul style="list-style-type: none"> <li>• Aims to provide 2 weeks industrial training to the Trainees as part of overall training program</li> <li>• Ideal for the manufacturing trades</li> <li>• As an alternate to the projects that involve expensive equipment</li> <li>• Focuses on increasing Trainee's motivation, productivity, efficiency and quick learning approach.</li> </ul>                                 |  |
| <b>Week 22</b> | <p>FARM RECORD</p> <p>➤ Success Story</p> <p style="text-align: center;"><i>(For further detail please see Page No: 4 &amp; 5)</i></p> | <ul style="list-style-type: none"> <li>• Output and their returns</li> <li>• Profits/ loss records</li> <li>• Keeping farm record system</li> <li>• Cropping history</li> <li>• Production records of crops</li> <li>• Livestock/ herd records</li> <li>• Weather/ rainfall records and their impacts on production/ losses</li> <li>• Different systems of book keeping</li> </ul> <p>Maintaining records of all</p> <ul style="list-style-type: none"> <li>• Inputs</li> <li>• Labor</li> </ul> <p>Output/ production</p> | <ul style="list-style-type: none"> <li>• <b>Task 43</b></li> <li>• <b>Task 44</b></li> </ul> <p style="text-align: center;"><i><u>Details may be seen at Annexure -I</u></i></p> |

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|                       | <p><b>How to search and apply for jobs in at least two labor marketplace countries (KSA, UAE, etc.)</b></p>          | <ul style="list-style-type: none"> <li>• Browse the following website and create an account on each website <ul style="list-style-type: none"> <li>▪ Bayt.com – The Middle East Leading Job Site</li> <li>▪ Monster Gulf – The International Job Portal</li> <li>▪ Gulf Talent – Jobs in Dubai and the Middle East</li> </ul> </li> <li>• Find the handy ‘search’ option at the top of your homepage to search for the jobs that best suit your skills.</li> <li>• Select the job type from the first ‘Job Type’ drop-down menu, next, select the location from the second drop-down menu.</li> <li>• Enter any keywords you want to use to find suitable job vacancies.</li> <li>• On the results page you can search for part-time jobs only, full-time jobs only, employers only, or agencies only. Tick the boxes as appropriate to your search.</li> <li>• Search for jobs by: <ul style="list-style-type: none"> <li>▪ Company</li> <li>▪ Category</li> <li>▪ Location</li> <li>▪ All jobs</li> <li>▪ Agency</li> </ul> </li> <li>• Industry</li> </ul> |                        |
| <p><b>Week 23</b></p> | <p><b>PROFIT/LOSS</b><br/> ➤ Motivational Lecture<br/> <i>(For further detail please see Page No: 4 &amp; 5)</i></p> | <ul style="list-style-type: none"> <li>• Profit and loss account/income statement Bank Accounts, cheques, discount, interest debts.</li> </ul> <p>Keeping records of all:</p> <ul style="list-style-type: none"> <li>• Inputs and their cost</li> <li>• Profits</li> <li>• Bank deposits/ with drawls statements</li> </ul>   | <p><b>•Task 45</b></p> |

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|                |  | <ul style="list-style-type: none"> <li>• Knowledge of good returning (interest) accounts.</li> </ul>  |   |
| <b>Week 24</b> | <p>FARM MANAGEMENT RECORDS</p> <p>➤ Success Story<br/>(For further detail please see Page No: 4 &amp; 5)</p>         | <ul style="list-style-type: none"> <li>• Appreciation and depreciation of stocks.</li> </ul> <p>Appreciation of:</p> <ul style="list-style-type: none"> <li>• Live and dead stocks</li> <li>• Land</li> <li>• Buildings</li> <li>• Machinery &amp; plants</li> <li>• Selling/ buying of stock according to market trends</li> <li>• Preparation of trading, profit and loss account and balance sheet.</li> <li>• Purchases</li> <li>• Sales</li> <li>• Profits</li> <li>• Losses</li> <li>• Situation analysis</li> <li>• Dealing with Patwari (Land record holding Govt official) and other govt. revenue officers</li> <li>• Land record keeping</li> <li>• Land revenue calculation</li> <li>• Water charges (Aabiana) calculation</li> <li>• Other revenue calculation <ul style="list-style-type: none"> <li>• Land purchasing and transfer procedures</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Task 46</li> <li>• Task 47</li> </ul> <p><u>Details may be seen at Annexure -I</u></p> |
| <b>Week 25</b> | <p>PERFORM HEALTH SAFETY</p> <p>➤ Motivational Lecture</p> <p>(For further detail please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Ensure personnel safety</li> </ul> <p>Trainee must be able to:</p> <ul style="list-style-type: none"> <li>• Execute pictorial guidelines and instruction of personal safety in working premises.</li> <li>• Ensure proper clothing for safe working</li> </ul>   | <ul style="list-style-type: none"> <li>• Task 48</li> <li>• Task 49</li> </ul>  |

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|                |   | <ul style="list-style-type: none"> <li>• Use safety kit during farm operations as per requirement</li> </ul> <p>Trainee must be able to:</p> <ul style="list-style-type: none"> <li>• Arrange first aid kit</li> <li>• Deal with different injuries and hazards</li> </ul> <p>Trainee will be able to:</p> <ul style="list-style-type: none"> <li>• Execute guidelines and instruction for safe working environment.</li> <li>• Ensure that relevant protective clothing and equipment is cleaned and stored in proper place</li> <li>• Deal with the potential threats (biological, chemical and physical)</li> <li>• Mark the specific working area for specific operations</li> <li>• Implement anti-theft measures and secure farm valuables</li> </ul> | <p><u>Details may be seen at Annexure -I</u></p>                         |
| <b>Week 26</b> | <p>ENTREPRENEURSHIP AND FINAL ASSESSMENT</p> <p>➤ Success story</p> <p>(For further detail please see Page No: 4 &amp; 5)</p> | <ul style="list-style-type: none"> <li>• Job Market Searching</li> <li>• Self-employment</li> <li>• Freelancing sites</li> <li>• Introduction</li> <li>• Identification of cropping seasons of different crops</li> <li>• Proper knowledge on crop production</li> <li>• Able to understand post-harvest losses</li> <li>• Knowledge on farm inputs</li> <li>• How to reach farmer and engage in modern farm technologies.</li> <li>• Sales and Marketing Strategies</li> <li>• Stakeholders Power Grid</li> <li>• RACI Model, SWOT Analysis, PEST Analysis</li> </ul>  | <p>• <b>Task 50</b></p> <p><u>Details may be seen at Annexure -I</u></p> |
|                | <ul style="list-style-type: none"> <li>• Final exams</li> </ul>   |   |  |

## List of Machinery / Equipment

| Sr. No | Name of item as per curriculum                    | Quantity physically available at the training location |
|--------|---|--|
| 1      | Tractor Fiat-480 (can be hired for cultivation)   | 01   |
| 2      | Cultivator  | 01   |
| 3      | Ridger  | 01   |
| 4      | Rotavator   | 01   |
| 5      | Spray Machines (knap sack sprayer)                | 05   |
| 6      | Suhaga  | 01   |
| 7      | Spade, Ramba, Kasola and other tillage implements | 30 each  |

### 1. Minimum Qualification of Teachers / Instructor

The qualification of teacher/instructor for this course should be

M.Sc. (Hons) Agri with major subject Agronomy/ Horticulture / Soil Science

Or

B.Sc. (Hons) Agri with major subject Agronomy/ Horticulture / Soil Science

### 2. Supportive Notes

Assessment context

Critical aspects

Assessment condition

Resources required for assessment



## Teaching Learning Material

| <b>Books Name</b>                           |               |
|---|---------------|
| Farm Business Management<br>the Core Skills | Peter Nuthall |

**Annexure-I**  
**Tasks for Certificate in Agriculture Farm Manager**

| <b>Task no.</b> | <b>Task</b>   | <b>Description</b>   | <b>Week</b> |
|-----------------|---|--|-------------|
| 1.              | <b>Search any three-farm manger in Pakistan?</b>                    | <ul style="list-style-type: none"> <li>• Google agriculture farm manager</li> <li>• Make a chart of these farm manger techniques</li> </ul>  | Week 1      |
| 2.              | <b>Find out the status of agriculture in Pakistan and worldwide</b> | <ul style="list-style-type: none"> <li>• Search out the status of agriculture in Pakistan</li> <li>• Search out status worldwide</li> <li>• Compare between both status</li> </ul> |             |
| 3.              | <b>Generate the contribution of agriculture in GDP</b>              | <ul style="list-style-type: none"> <li>• Understand the concept of GDP</li> <li>• Devise the ways to maximize the economy through agriculture</li> </ul>                           |             |
| 4.              | <b>Identify soil types in Pakistan?</b>                             | Knowledge of <ul style="list-style-type: none"> <li>• Sandy, clay and loam soils.</li> </ul>   | Week 2      |
| 5.              | <b>Identify the factors effecting soil texture in Pakistan</b>      | Find out soil chemistry; <ul style="list-style-type: none"> <li>• pH</li> <li>• EC</li> <li>• Organic mater</li> <li>• Water holding capacity.</li> </ul>                          |             |
| 6.              | <b>Knowledge of abiotic factors</b>                                 | <ul style="list-style-type: none"> <li>• Rainfall</li> <li>• Climate</li> <li>• Humidity</li> <li>• Aeration</li> </ul>  |             |
| 7.              | <b>Understand the soil biology</b>                                  | Knowledge of beneficial microorganisms; <ul style="list-style-type: none"> <li>• Nematodes</li> <li>• Earthworm</li> </ul>   | Week 3      |
| 8.              | <b>Identify the role of soil fertilizers</b>                        | Awareness about <ul style="list-style-type: none"> <li>• Macronutrients: N, P, K, S, C, M</li> <li>• Micronutrients: Fe, B, Mn, Z, Co</li> </ul>                                   |             |
| 9.              | <b>Knowledge of organic matter</b>                                  | <ul style="list-style-type: none"> <li>• Plant residue</li> <li>• Animal waste</li> <li>• Living biomass of microbes</li> <li>• Humus</li> </ul>                                   | Week 4      |
| 10.             | <b>Study of inorganic matter</b>                                    | <ul style="list-style-type: none"> <li>• Detailed study of soil nutrients</li> </ul>   |             |
| 11.             | <b>Identify the major soil problems in Pakistan</b>                 | <ul style="list-style-type: none"> <li>• Understand the factors affecting soil health</li> </ul>   | Week 5      |
| 12.             | <b>Evaluate the effects of heavy metals on soil</b>                 | <ul style="list-style-type: none"> <li>• Observe Problems related to heavy metal</li> <li>• Heavy metals management</li> </ul>   |             |
| 13.             | <b>Identify the Soil erosion issues</b>                             | <ul style="list-style-type: none"> <li>• Types of soil erosion</li> <li>• Erosion management</li> </ul>  |             |
| 14.             | <b>Make a herbarium of rabi and kharif crops</b>                    | <ul style="list-style-type: none"> <li>• Visit field</li> <li>• Collect rabi and kharif crop samples</li> <li>• Make a herbarium</li> </ul>  |             |

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| 15. | <b>Knowledge of crop patterns in Pakistan</b> | Major types of crop pattern; <ul style="list-style-type: none"><li>• Monocropping</li></ul> |  |
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|     |   | <ul style="list-style-type: none"> <li>• Mixed cropping</li> <li>• Crop rotation</li> <li>• Intercropping</li> </ul>  | Week 6  |
| 16. | <b>Generate the advantages of crop patterns</b>                                     | <ul style="list-style-type: none"> <li>• Economic importance in Pakistan</li> </ul>   |         |
| 17. | <b>Knowledge of cropping seasons</b>  | <ul style="list-style-type: none"> <li>• Seasons of various crops</li> <li>• Knowledge of sowing or harvesting</li> <li>• Effects of early/late sowing or harvesting</li> </ul> |         |
| 18. | <b>Understand the land preparation</b>  | <ul style="list-style-type: none"> <li>• Knowledge about land preparation tools and equipment's.</li> </ul>   | Week 7  |
| 19. | <b>Generate the criteria for high yield varieties</b>                               | <ul style="list-style-type: none"> <li>• Select disease resistant and high yield varieties</li> </ul>   |         |
| 20. | <b>Identify the aspects of seed selection</b>                                       | <ul style="list-style-type: none"> <li>• Select healthy seeds</li> <li>• Select genetically pure seeds</li> <li>• Select physically sound seeds</li> </ul>                      |         |
| 21. | <b>Knowledge about fertilizers</b>  | <ul style="list-style-type: none"> <li>• Appropriate time of application</li> <li>• Dose selection</li> <li>• Methods of application</li> </ul>                                 | Week 8  |
| 22. | <b>Understand the concept of weed</b>   | <ul style="list-style-type: none"> <li>• Identify weeds</li> <li>• Weed management strategies</li> </ul>  |         |
| 23. | <b>Study of harvesting and storage techniques</b>                                   | <ul style="list-style-type: none"> <li>• Methods of harvesting</li> <li>• Appropriate tools and equipment's.</li> <li>• Suitable storage methods</li> </ul>                     |         |
| 24. | <b>Understand the importance of water</b>   | Effects on; <ul style="list-style-type: none"> <li>• Seed germination</li> <li>• Plant growth</li> <li>• Nutrient transportation</li> </ul>                                     | Week 9  |
| 25. | <b>Calculate the water requirement</b>  | <ul style="list-style-type: none"> <li>• Appropriate irrigation methods</li> <li>• Knowledge about needs of water for various crops</li> </ul>                                  |         |
| 26. | <b>Classify the irrigation methods</b>  | <ul style="list-style-type: none"> <li>• Understand different methods of irrigation in various crops</li> </ul>   | Week 10 |
| 27. | <b>Understand the Irrigation management</b>   | Irrigation management practices for different crops   |         |
| 28. | <b>Knowledge of storage and irrigation practices for Northern areas of Pakistan</b> | <ul style="list-style-type: none"> <li>• Appropriate water storage techniques</li> <li>• Knowledge about irrigation techniques on hilly/fallow lands</li> </ul>                 | Week 11 |
| 29. | <b>Understand the knowledge of irrigation machinery</b>                             | <ul style="list-style-type: none"> <li>• Maintenance of irrigation appliances</li> <li>• Water conservation practices according to machinery</li> </ul>                         | Week 12 |
| 30. | <b>Analyze the Production losses</b>  | <ul style="list-style-type: none"> <li>• Understand the basic factors affecting yield losses</li> </ul>   |         |

|            | <b>Mid-term exams</b>                                     |  | Week 13 |
|------------|---|--|---------|
| <b>31.</b> | <b>Understand the role of harvest technologies</b>        | <ul style="list-style-type: none"> <li>• Knowledge about harvesting methods.</li> <li>• Appropriate collection of harvested crops.</li> <li>• Transportation and processing techniques</li> </ul>                                | Week 14 |
| <b>32.</b> | <b>Knowledge of post-harvest strategies</b>               | <ul style="list-style-type: none"> <li>• Understand the causes of low yield factors</li> <li>• Transportation and processing losses of field crops, vegetables and fruits.</li> </ul>  | Week 15 |
| <b>33.</b> | <b>Identify the post-harvest yield losses</b>             | <ul style="list-style-type: none"> <li>• Understand the seasonal yield losses</li> <li>• Picking, Packing and transportation losses</li> </ul>   | Week 16 |
| <b>34.</b> | <b>Understand the storage practices</b>                   | <ul style="list-style-type: none"> <li>• Benefits of storage</li> <li>• Suitable environmental conditions for storage</li> <li>• Pest infestation on storage products</li> </ul>   | Week 17 |
| <b>35.</b> | <b>Knowledge of proper storage conditions</b>             | <ul style="list-style-type: none"> <li>• Factors effecting the storage conditions</li> <li>• Appropriate precautionary measures of storage house</li> <li>• Selection and role of preservatives</li> </ul>                       | Week 18 |
| <b>36.</b> | <b>Study of fumigation practices</b>                      | <ul style="list-style-type: none"> <li>• Selection of appropriate fumigation methods</li> </ul>  | Week 19 |
| <b>37.</b> | <b>Understand the follow up of storage house</b>          | <ul style="list-style-type: none"> <li>• Regular checkups to avoid pests, fungal and bacterial infestations</li> </ul>   |         |
| <b>38.</b> | <b>Knowledge about chemistry of fruits and vegetables</b> | <ul style="list-style-type: none"> <li>• Physiochemical studies of various fruits and vegetables</li> <li>• Nutrients and water requirement strategies</li> <li>• Proper knowledge on ripening and harvesting methods</li> </ul> | Week 20 |
| <b>39.</b> | <b>Understand the appropriate picking methods</b>         | <ul style="list-style-type: none"> <li>• Manual and mechanical picking practices</li> </ul>  |         |
| <b>40.</b> | <b>Generate the training of trainees</b>                  | <ul style="list-style-type: none"> <li>• Knowledge about hiring skills</li> <li>• Training strategies for new candidates</li> <li>• Time and duration of training</li> </ul>   |         |

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| 41. | <b>Create Projects/assignments</b>            | <ul style="list-style-type: none"> <li>Idea generation</li> <li>Development of leadership skills</li> </ul>   | Week 21 |
| 42. | <b>Initiate commercialization of projects</b> | <ul style="list-style-type: none"> <li>Assign the target-based projects</li> </ul>  |         |
| 43. | <b>Knowledge of farm management</b>           | <ul style="list-style-type: none"> <li>Basic methods of farm design</li> <li>Maintenance of farm tool and equipment's</li> </ul>  | Week 22 |
| 44. | <b>Create farm records</b>                    | <ul style="list-style-type: none"> <li>Input and output records</li> <li>Proper reports and data recording</li> <li>Labor, livestock and dairy records</li> <li>Production records</li> <li>Weather changing records</li> </ul>                       |         |
| 45. | <b>Understand the profit/loss of farms</b>    | <ul style="list-style-type: none"> <li>Total income</li> <li>Bank deposits, statements, cheques and accounts.</li> <li>Profit/loss balance sheet</li> <li>Interest rate</li> </ul>  | Week 23 |
| 46. | <b>Create stock management records</b>        | <ul style="list-style-type: none"> <li>Balance of living/non-living material</li> <li>Construction stocks</li> <li>On-farm machinery records</li> <li>Preparation of records on sale, purchase etc.</li> </ul>  | Week 24 |
| 47. | <b>Prepare land records</b>                   | <ul style="list-style-type: none"> <li>Appropriate dealing with land recording Govt. officers</li> <li>Calculation of land revenue generation at farm</li> <li>Knowledge about land purchase/transfer procedures</li> </ul>                           |         |
| 48. | <b>Understand personal safety measures</b>    | <ul style="list-style-type: none"> <li>Appropriate knowledge on safe working environment</li> <li>Basic tools and equipment</li> <li>Complete knowledge on instructions and guidelines for personal health measures</li> </ul>                        | Week 25 |
| 49. | <b>Knowledge on first-aid</b>                 | <ul style="list-style-type: none"> <li>Knowledge to use first aid kit in emergency conditions</li> <li>Implementation of anti-theft measures</li> </ul>   |         |
| 50. | <b>Generate entrepreneurship skills</b>       | <ul style="list-style-type: none"> <li>Knowledge on business development fundamentals</li> <li>Freelancing capabilities</li> <li>Fund's development</li> <li>Sales and marketing strategies</li> <li>Awareness on jobs and self-employment</li> </ul> | Week 26 |

|  |  |   |  |
|--|--|---|--|
|  |  | <ul style="list-style-type: none"><li>• Business development incubation centers</li><li>• Final cost management</li></ul> |  |
|  | <ul style="list-style-type: none"><li>• Final exam</li></ul> |   |  |

**What is freelancing and how you can make money online - BBCURDU**

<https://www.youtube.com/watch?v=9jCJN3F0kA>

**What Is the Role of Good Manners in the Workplace? By Qasim Ali Shah | In Urdu**

<https://www.youtube.com/watch?v=Qi6Xn7yKIIQ>

**Hisham Sarwar Motivational Story | Pakistani Freelancer**

[https://www.youtube.com/watch?v=CHm\\_BH7xAXk](https://www.youtube.com/watch?v=CHm_BH7xAXk)

**Success story of M. Aslam from Toba Tek Singh**

<http://ofwm.agripunjab.gov.pk/system/files/Aslam-TTS.pdf.com/watch?v=9WrmYYhr7S0>

**Success Story of a drip irrigation on strawberry.**

[http://ofwm.agripunjab.gov.pk/system/files/Strawberry\\_LiaqatAli\\_TTS\\_0.pdf.com/watch?v=tIQ0CWgszI0](http://ofwm.agripunjab.gov.pk/system/files/Strawberry_LiaqatAli_TTS_0.pdf.com/watch?v=tIQ0CWgszI0)

**Failure to Millionaire - How to Make Money Online | Fiverr Superhero Aaliyaan Success Story**

<https://www.youtube.com/watch?v=d1hocXWSpus>



## Annexure-II

### **SUGGESTIVE FORMAT AND SEQUENCE ORDER OF MOTIVATIONAL LECTURE.**

#### **Mentor**

Mentors are provided an observation checklist form to evaluate and share their observational feedback on how students within each team engage and collaborate in a learning environment. The checklist is provided at two different points: Once towards the end of the course. The checklists are an opportunity for mentors to share their unique perspective on group dynamics based on various team activities, gameplay sessions, pitch preparation, and other sessions, giving insights on the nature of communication and teamwork taking place and how both learning outcomes and the student experience can be improved in the future.

#### **Session- 1 (Communication):**

Please find below an overview of the activities taking place Session plan that will support your delivery and an overview of this session’s activity.

| Session- 1 OVERVIEW   |
|---|
| Aims and Objectives:  |
| <ul style="list-style-type: none"> <li>• To introduce the communication skills and how it will work</li> <li>• Get to know mentor and team - build rapport and develop a strong sense of a team</li> <li>• Provide an introduction to communication skills</li> <li>• Team to collaborate on an activity sheet developing their communication, teamwork, and problem-solving</li> <li>• Gain an understanding of participants’ own communication skills rating at the start of the program</li> </ul> |

| Activity:   | Participant Time  | Teacher Time | Mentor Time  |
|---|---|--------------|--|
| Intro Attend and contribute to the scheduled.   |   |              |  |
| Understand good communication skills and how it works.  |   |              |  |
| Understand what good communication skills mean  |   |              |  |
| Understand what skills are important for good communication skills  |   |              |  |
| <b>Key learning outcomes:</b>   | <b>Resources:</b>   |              | <b>Enterprise skills developed:</b>  |
| <ul style="list-style-type: none"> <li>• Understand the communication skills and how it works.</li> </ul> | <ul style="list-style-type: none"> <li>• Podium</li> <li>• Projector</li> <li>• Computer</li> <li>• Flip Chart</li> </ul> |              | <ul style="list-style-type: none"> <li>• Communication</li> <li>• Self Confidence</li> <li>• Teamwork</li> </ul> |

|  |  |  |
|--|--|--|
| <ul style="list-style-type: none"> <li>• Understand what communication skills mean</li> <li>• Understand what skills are important for communication skills</li> </ul> | <ul style="list-style-type: none"> <li>• Marker</li> </ul> |  |
|--|--|--|

| <b>Schedule</b>  | <b>Mentor Should do</b>   |
|--|---|
| <b>Welcome:</b><br><b>5 min</b>                        | Short welcome and ask the <b>Mentor</b> to introduce him/herself.<br>Provide a brief welcome to the qualification for the class.<br>Note for Instructor: Throughout this session, please monitor the session to ensure nothing inappropriate is being happened.   |
| <b>Icebreaker:</b><br><b>10 min</b>                    | Start your session by delivering an icebreaker, this will enable you and your team to start to build rapport and create a team presentation for the tasks ahead.<br>The icebreaker below should work well at introductions and encouraging communication, but feel free to use others if you think they are more appropriate. It is important to encourage young people to get to know each other and build strong team links during the first hour; this will help to increase their motivation and communication throughout the sessions.   |
| <b>Introduction &amp; Onboarding:</b><br><b>20mins</b> | Provide a brief introduction of the qualification to the class and play the “Onboarding Video or Presentation”. In your introduction cover the following: <ol style="list-style-type: none"> <li>1. Explanation of the program and structure. (Kamyab jawan Program)</li> <li>2. How you will use your communication skills in your professional life.</li> <li>3. Key contacts and key information – e.g., role of teacher, mentor, and SEED. Policies and procedures (user agreements and “contact us” section). Everyone to go to the Group Rules tab at the top of their screen, read out the rules, and ask everyone to verbally agree. Ensure that the consequences are clear for using the platform outside of hours. (9am-8pm)</li> <li>4. What is up next for the next 2 weeks ahead so young people know what to expect (see pages 5-7 for an overview of the challenge). Allow young people to ask any questions about the session topic.</li> </ol> |
| <b>Team Activity Planning:</b><br><b>30 minutes</b>    | <b>MENTOR:</b> Explain to the whole team that you will now be planning how to collaborate for the first and second collaborative Team Activities that will take place outside of the session. There will not be another session until the next session so this step is required because communicating and making decisions outside of a session requires a different strategy that must be  |

|  |  |
|--|--|
|  | <p>agreed upon so that everyone knows what they are doing for this activity and how.</p> <ul style="list-style-type: none"> <li>• “IDENTIFY ENTREPRENEURS” TEAM ACTIVITY</li> <li>• “BRAINSTORMING SOCIAL PROBLEMS” TEAM ACTIVITY”</li> </ul> <p><i>As a team, collaborate on a creative brainstorm on social problems in your community. Vote on the areas you feel most passionate about as a team, then write down what change you would like to see happen.</i></p> <p>Make sure the teams have the opportunity to talk about how they want to work as a team through the activities e.g., when they want to complete the activities, how to communicate, the role of the project manager, etc.</p> <p>Make sure you allocate each young person a specific week that they are the project manager for the weekly activities and make a note of this.</p> <p>Type up notes for their strategy if this is helpful - it can be included underneath the Team Contract.</p> |
| <p><b>Session Close:<br/>5 minutes</b></p> | <p><b>MENTOR:</b> Close the session with the opportunity for anyone to ask any remaining questions.</p> <p><b>Instructor:</b><br/>Facilitate the wrap-up of the session. A quick reminder of what is coming up next and when the next session will be.</p>   |

**MOTIVATIONAL LECTURES LINKS.**

| <b><u>TOPIC</u></b>            | <b><u>SPEAKER</u></b>   | <b><u>LINK</u></b>  |
|--------------------------------|---|---|
| How to Face Problems in Life   | Qasim Ali Shah  | <a href="https://www.youtube.com/watch?v=OrQte08MI90">https://www.youtube.com/watch?v=OrQte08MI90</a> |
| Just Control Your Emotions     | Qasim Ali Shah  | <a href="https://www.youtube.com/watch?v=JzFs_yJt-w">https://www.youtube.com/watch?v=JzFs_yJt-w</a>   |
| How to Communicate Effectively | Qasim Ali Shah  | <a href="https://www.youtube.com/watch?v=PhHAQEGehKc">https://www.youtube.com/watch?v=PhHAQEGehKc</a> |
| Your ATTITUDE is Everything    | Tony Robbins<br>Les Brown<br>David Goggins<br>Jocko Willink<br>Wayne Dyer<br>Eckart Tolle | <a href="https://www.youtube.com/watch?v=5fS3rj6eIFg">https://www.youtube.com/watch?v=5fS3rj6eIFg</a> |
| Control Your EMOTIONS          | Jim Rohn<br>Les Brown<br>TD Jakes<br>Tony Robbins   | <a href="https://www.youtube.com/watch?v=chn86sH0O5U">https://www.youtube.com/watch?v=chn86sH0O5U</a> |
| Defeat Fear, Build Confidence  | Shaykh Atif<br>Ahmed  | <a href="https://www.youtube.com/watch?v=s10dzfbozd4">https://www.youtube.com/watch?v=s10dzfbozd4</a> |
| Wisdom of the Eagle            | Learn Kurooji   | <a href="https://www.youtube.com/watch?v=bEU7V5rJTw">https://www.youtube.com/watch?v=bEU7V5rJTw</a>   |
| The Power of ATTITUDE          | Titan Man   | <a href="https://www.youtube.com/watch?v=r8LJ5X2eigU">https://www.youtube.com/watch?v=r8LJ5X2eigU</a> |
| STOP WASTING TIME              | Arnold Schwarzenegger   | <a href="https://www.youtube.com/watch?v=kzSBrJmXgdg">https://www.youtube.com/watch?v=kzSBrJmXgdg</a> |
| Risk of Success                | Denzel Washington   | <a href="https://www.youtube.com/watch?v=tbnzAVRZ9Xc">https://www.youtube.com/watch?v=tbnzAVRZ9Xc</a> |

**SUCCESS STORY**

| S. No | Key Information  | Detail/Description  |
|-------|--|---|
| 1.    | <b>Self &amp; Family background</b>  | <p><b>Ahmed</b>, who lives in Haripur (district Hazara), is an example of how hard work and perseverance can reap rich rewards when taking training from NAVTCC. The Agri farm manager works exclusively on government projects and has earned, on average, <b>US\$10,000</b> per month for the past several months. But this isn't a story of overnight success – Ahmed has had to work hard to differentiate himself and stay true to his goal.</p> <p>It was a full year later, in June 2018, when Ahmed in conclusion decided to jump in technical courses from NAVTCC. He signed up for one of the numerous agronomy projects that connect agronomist or entomologist with people or companies that have small projects, like building a barren land into fertile. He had already started a small business to help pay for his farmer friends, so he was nervous and apprehensive about the decision. “I gave myself two or three months at most. If I didn't succeed, then I would go back to running the business as it was showing potential,” he says.</p> <p><b>If at first, you don't succeed, try try again</b></p> |
| 2.    | <b>How he came on board NAVTTC Training/ or got trained through any other source</b> | <p>Certification in farm manager from (NAVTTC partner institute).</p> <ul style="list-style-type: none"> <li>• Through radio he came to know about NAVTCC.</li> <li>• He got training from their institutes.</li> <li>• Then achieve certificate from NAVTCC.</li> </ul>  |
| 3.    | <b>Post-training activities</b>  | <p><b>Ahmed's</b> area of expertise is in <b>farm manger</b>. In his first month using Managing techniques, he pitched mostly for projects centered around land preparation. But it wasn't so simple. In the first few weeks, he didn't hear back from even a single colleague farmer, despite pitching for dozens of projects.</p> <p>“I needed to understand what worked, so I read blogs, participated in forums, and analyzed profiles of successful farm mangers. It was a difficult struggle, but I didn't want to give up,” he explains.</p> <p><b>Ahmed</b> says he understands why small farmer would be anxious giving projects to untested farm managers.</p>  |

|    |   |   |
|----|---|---|
|    |   | <p>They have hundreds of options to choose from, he explains, and to give a task to someone with no experience requires a strong leap of faith.</p> <p>A slow stream of projects started to come Ali's way. Within a few months, he was landing an average of a hundred projects every month, with a large number of repeat farmers. He also expanded the range of his professional services, branching out from logo design to business cards, banners, Facebook cover pages, letterheads, and stationery.</p> <p>But he's had to face his fair share of challenges too. The careless state of internet infrastructure in his city, Haripur, threatened to disrupt his farm managing career. "Sometimes I haven't had connectivity for two days straight," he explains. "That's unthinkable for someone who makes his livelihood on the internet."</p> |
| 4. | <p><b>Message to others</b><br/><b>(under training)</b></p> | <ul style="list-style-type: none"> <li>• Take the training opportunity seriously</li> <li>• Impose self-discipline and ensure regularity</li> <li>• Make Hard work pays in the end so be always ready for the same.</li> </ul>  |

**Note:** Success story is a source of motivation for the trainees and can be presented in several ways/forms in a NAVTTC skill development course as under: -

1. To call a passed out successful trainee of the institute. He will narrate his success story to the trainees in his own words and meet trainees as well.
2. To see and listen to a recorded video/clip (5 to 7 minutes) showing a successful trainee Audio-video recording that has to cover the above-mentioned points. \*
3. The teacher displays the picture of a successful trainee (name, trade, institute, organization, job, earning, etc.) and narrates his/her story in the teacher's own motivational words.

\* *The online success stories of renowned professional can also be obtained from **Annex-II***

## Workplace/Institute Ethics Guide

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Work ethic is a standard of conduct and values for job performance. The modern definition of what constitutes good work ethics often varies. Different businesses have different expectations. Work ethic is a belief that hard work and diligence have a moral benefit and an inherent ability, virtue, or value to strengthen character and individual abilities. It is a set of values-centered on the importance of work and manifested by determination or desire to work hard.

The following ten work ethics are defined as essential for student success:

**1. Attendance:**

Be at work every day possible, plan your absences don't abuse leave time. Be punctual every day.

**2. Character:**

Honesty is the single most important factor having a direct bearing on the final success of an individual, corporation, or product. Complete assigned tasks correctly and promptly. Look to improve your skills.

**3. Team Work:**

The ability to get along with others including those you don't necessarily like. The ability to carry your weight and help others who are struggling. Recognize when to speak up with an idea and when to compromise by blend ideas together.

**4. Appearance:**

Dress for success set your best foot forward, personal hygiene, good manner, remember that the first impression of who you are can last a lifetime

**5. Attitude:**

Listen to suggestions and be positive, accept responsibility. If you make a mistake, admit it. Values workplace safety rules and precautions for personal and co-worker safety. Avoids unnecessary risks. Willing to learn new processes, systems, and procedures in light of changing responsibilities.

**6. Productivity:**

Do the work correctly, quality and timelines are prized. Get along with fellows, cooperation is the key to productivity. Help out whenever asked, do extra without being asked. Take pride in your work, do things the best your know-how. Eagerly focuses energy on accomplishing tasks, also referred to as demonstrating ownership. Takes pride in work.

**7. Organizational Skills:**

Make an effort to improve, learn ways to better yourself. Time management; utilize time and resources to get the most out of both. Take an appropriate approach to social interactions at work. Maintains focus on work responsibilities.

**8. Communication:**

Written communication, being able to correctly write reports and memos. Verbal communications, being able to communicate one on one or to a group.

**9. Cooperation:**

Follow institute rules and regulations, learn and follow expectations. Get along with fellows, cooperation is the key to productivity. Able to welcome and adapt to changing work situations and the application of new or different skills.

**10. Respect:**

Work hard, work to the best of your ability. Carry out orders, do what's asked the first time. Show respect, accept, and acknowledge an individual's talents and knowledge. Respect's diversity in the workplace, including showing due respect for different perspectives, opinions, and suggestions.