

Government of Pakistan

National Vocational and Technical Training Commission

Prime Minister's Hunarmand Pakistan Program

"Skills for All"



Course Contents/ Lesson Plan

Course Title: Plant Operator

Duration: 6 Months

Course Details / Description & Preliminaries

Course Title	Plant Operator
Objectives and Expectations	<p><u>Employable skills through an intensive course on Plant Operator</u></p> <p>This is a special course designed to address unemployment in the youth. The course aims to achieve the above objective through hands on practical training delivery by a team of dedicated professionals having rich market/work experience. This course is therefore not just for developing a theoretical understanding/back ground of the trainees. Contrary to that it is primarily aimed at equipping the trainees to perform commercially in a market space in independent capacity or as a member of a team.</p> <p>The course therefore is designed to impart not only technical skills but also soft skills (i.e. interpersonal/communication skills; personal grooming of the trainees etc.) as well as entrepreneurial skills (i.e. marketing skills; free lancing etc.). The course also seeks to inculcate work ethics to foster better citizenship in general and improve the image of Pakistani work force in particular.</p> <p>Main Expectations:</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 individual trainee to prepare them for such market</p>

<p>Key Features of Training & Special Modules</p>	<p>roles during/after the training.</p> <ol style="list-style-type: none"> 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. ii. In order to materialize the main expectations, a special module on Job Search & Entrepreneurial Skills has been included in the later part of this course (5th & 6th 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 forms 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. iii. A module on Work Place Ethics has also been included to highlight the importance of good and positive behavior at work place in the 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
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<p>Training Tools/ Methodology</p>	<p>puts his heart and soul into these otherwise non-technical components, the image of Pakistani workforce would undergo a positive transformation in the local as well as international job markets.</p> <p>In order to maintain interest and motivation of the trainees throughout the course, modern techniques such as:</p> <ul style="list-style-type: none"> • Motivational lectures • Success stories • Case studies <p>These techniques would be employed as an additional training tool wherever possible (these are explained in the subsequent section on Training Methodology).</p> <p>Lastly, evaluation of the competencies acquired by the trainees will be done objectively at various stages of the training and 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.</p> <p>(i) Motivational Lectures</p> <p>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:</p> <ul style="list-style-type: none"> • Clear Purpose to convey 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.
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- 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.

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 longer time without boredom and loss of interest because they can clearly 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.

(ii) Success Stories

Another effective way of motivating the trainees is by means of 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 by means of 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. 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

	<p>quality success stories for inclusion in the training as suggested in the weekly lesson plan given in this document.</p> <p>Suggestive structure and sequence of a sample success story and its various shapes can be seen at annexure III.</p> <p style="text-align: center;">(iii) Case Studies</p> <p>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.</p> <p>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 class room atmosphere interesting thus maintaining the trainee interest in training till the end of the course.</p> <p>Depending on suitability to the trade, the weekly lesson plan in this document may suggest case studies to be presented to the trainees. The trainer may adopt a power point presentation or video format for such case studies whichever is deemed suitable but it's important that only those cases are selected that are relevant and of a learning value. The Trainees should be required and supervised to carefully analyze the cases.</p> <p>For the purpose they must be encouraged to inquire and collect specific information / data, actively participate in the discussions and intended solutions of the problem / situation.</p> <p>Case studies can be implemented in the following ways:-</p> <ol style="list-style-type: none"> 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
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	<p>and domestic accidents must be arranged by the training institute)</p> <p>iii. Field visits(At least one visit to a trade specific major industry/ site must be arranged by the training institute)</p>
Learning Outcome of the Course	<p>By the end of the course the trainees will be able to have following competencies and skills.</p> <ul style="list-style-type: none"> • Operate the Confectionery and Bakery plants • Monitor the raw materials quality supplied for manufacturing process. • Identify all processes and quality parameters. • Distinguish different types of materials. • Assess faults by feel or looking at material. • Identify the cause of stoppages / breakages on machine. • Understand the good and bad practices during manufacturing. • Complete work in a team • Communicate professionally
Course Execution Plan	<p>Total duration of course: 6 months (26 Weeks)</p> <p>Class hours: 4 hours per day</p> <p>Theory: 20%</p> <p>Practical: 80%</p> <p>Weekly hours: 20 hours per week</p> <p>Total contact hours: 520hours</p>
Companies Offering Jobs in the respective trade	<p>Public/Private industries including:</p> <ol style="list-style-type: none"> 1. Biscuit Plant 2. Bubblegum Plant 3. Jelly Plant 4. Candy Plant 5. Chocolate Plant
Job Opportunities	<ul style="list-style-type: none"> • Plant Operator • Assistant Plant Operator • Assistant Supervisor

No of Students	25
Learning Place	Classroom / Lab / Workshop
Instructional Resources	

WEEKLY SCHEDULE OF TRAINING

Scheduled Week	Module Title	Learning Units	Remarks
Week 1	Biscuit Plant	<p>Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>)</p> <ul style="list-style-type: none"> • Introduction of the whole course of study • Detailed Introduction of <ul style="list-style-type: none"> ○ Raw Materials ○ Machines ○ Equipment etc. Used in Biscuit Manufacturing 	<p>Task-1 Task-2 Task-3 Task-4 Task-5 Task-6 Task-7 Task-8 Task-9 Task-10 Task-11 Task-12 Task-13 Task-14 Task-15 Task-16 (Details may be seen at Annexure-I)</p>
Week 2		<p>Success stories (<i>For further detail please see Page No: 3& 4</i>)</p> <p><u>Mixing:</u></p> <ul style="list-style-type: none"> • Mixing of Raw Materials according to the Recipes and Preparing Dough 	<p>Task-17 Task-18 Task-19 Task-20 Task-21 Task-22 Task-23 Task-24 Task-25 Task-26 Task-27 (Details may be seen at Annexure-I)</p>

Week 3		Motivational Lecture (For further detail please see Page No: 3& 4) <u>Cutting:</u> <ul style="list-style-type: none"> Cutting of Dough and giving biscuit shape 	Task-28 Task-29 Task-30 Task-31 Task-32 (Details may be seen at Annexure-I) Home Assignment-1 (Details may be seen at Annexure-II)
Week 4		Success stories (For further detail please see Page No: 3& 4) <u>Oven:</u> <ul style="list-style-type: none"> Baking of the biscuits 	Task-33 Task-34 Task-35 Task-36 Task-37 Task-38 (Details may be seen at Annexure-I) Monthly Test 1
Week 5		Motivational Lecture (For further detail please see Page No: 3& 4) <u>Wrapping & Packing:</u> <ul style="list-style-type: none"> Wrapping of Biscuits as per requirements and packing into Boxes & Cartons 	Task-39 Task-40 (Details may be seen at Annexure-I)
Week 6	Bubblegum Plant	Success stories (For further detail please see Page No: 3& 4) <ul style="list-style-type: none"> Detailed Introduction of Raw Materials, Machines & Equipment etc. Used in Bubble Gum Manufacturing 	Task-41 Task-42 Task-43 Task-44 Task-45 Task-46 Task-47 Task-48 Task-49 Task-50

			Task-51 Task-52 Task-53 Task-54 Task-55 Task-56 (Details may be seen at Annexure-I)
Week 7		Motivational Lecture (For further detail please see Page No: 3& 4) Kitchen / Recipe: Mixing of Raw Materials according to the Recipes	Task-57 Task-58 Task-59 Task-60 (Details may be seen at Annexure-I)
Week 8		Success stories (For further detail please see Page No: 3& 4) Mixing Plant: Mixing of Raw Material batches	<div> Home Assignment-2 (Details may be seen at Annexure-II) </div> <div> Monthly Test 2 </div>
Week 9		Motivational Lecture (For further detail please see Page No: 3& 4) Cutting: Cutting of mixture in requires size for extrusion process	Task-61 Task-62 (Details may be seen at Annexure-I)
Week 10		Success stories (For further detail please see Page No: 3& 4) Extruder Machines: Cutting and Giving Shape as bubblegum	

Week 11		Motivational Lecture (For further detail please see Page No: 3& 4) Wrapping & Packing: Wrapping of Bubblegum as per requirements and packing into Boxes & Cartons	Task-63 Task-64 (Details may be seen at Annexure-I)
Week 12	Jelly Plant	Success stories (For further detail please see Page No: 3& 4) Detailed Introduction of Raw Materials, Machines & Equipment etc. Used in Jelly Manufacturing	Task-65 Task-66 Task-67 Task-68 Task-69 Task-70 Task-71 Task-72 Task-73 Task-74 Task-75 Task-76 Task-77 Task-78 Task-79 Task-80 (Details may be seen at Annexure-I)
	Build your CV	Download professional CV template from any good site (https://www.coolfreecv.com or relevant) <ul style="list-style-type: none"> • Add Personal Information • Add Educational details • Add Experience/Portfolio • Add contact details/profile links 	
Week 13	Overview of the previous weeks & Mid Term Examination		
Week 14		Motivational Lecture (For further detail please see Page No: 3& 4) Kitchen / Recipe: Mixing of Raw Materials according to the Recipes & Cooking	Task-81 Task-82 Task-83 (Details may be seen at Annexure-I)

Week 15		Success stories (<i>For further detail please see Page No: 3& 4</i>) Plant: Giving Jelly Shape to the cooked materials	Task-84 Task-85 (Details may be seen at Annexure-I)
	Create an account profile on Fiverr (at least two gigs) and Upwork	Create an account by following these steps: Step 1: Personal Info Step 2: Professional Info Step 3: Linked Accounts Step 4: Account Security	Home Assignment-3 (Details may be seen at Annexure-II)
Monthly Test 3			
Week 16		Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) Curing: Setting the Jellies in low temperature Curing Room	
Week 17		Success stories (<i>For further detail please see Page No: 3& 4</i>) Wrapping & Packing: Wrapping of Jellies as per requirements and packing into Boxes & Cartons	Task-86 Task-87 (Details may be seen at Annexure-I)
Week 18	Candy Plant	Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) Detailed Introduction of Raw Materials, Machines & Equipment etc. Used in Candy Manufacturing	Task-88 Task-89 Task-90 Task-91 Task-92 Task-93 Task-94 Task-95 Task-96 Task-97 Task-98 Task-99 Task-100 Task-101 Task-102 Task-103

			(Details may be seen at Annexure-I)
Week 19		<p>Success stories (<i>For further detail please see Page No: 3& 4</i>)</p> <p>Kitchen / Recipe: Mixing of Raw Materials according to the Recipes & Cooking</p>	<p>Task-104 Task-105 Task-106 Task-107 (Details may be seen at Annexure-I)</p> <p>Home Assignment-4 (Details may be seen at Annexure-II)</p>
Week 20		<p>Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>)</p> <p>Plant / Cutting: Giving Candy Shape to the syrup / materials</p>	<p>Task-108 Task-109 Task-110 Task-111 (Details may be seen at Annexure-I)</p> <p>Monthly Test 4</p>
Week 21		<p>Success stories (<i>For further detail please see Page No: 3& 4</i>)</p> <p>Wrapping & Packing Wrapping of Candies as per requirements and packing into Boxes & Cartons</p>	<p>Task- (Details may be seen at Annexure-I)</p>

Week 22	Chocolate Plant	Motivational Lecture (For further detail please see Page No: 3& 4) Detailed Introduction of Raw Materials, Machines & Equipment etc. Used in Candy Manufacturing	Task-114 Task-115 Task-116 Task-117 Task-118 Task-119 Task-120 Task-121 Task-122 Task-123 Task-124 Task-125 Task-126 Task-127 Task-128 Task-129 (Details may be seen at Annexure-I)
	How to search and apply for jobs in at least two labor marketplace countries (KSA, UAE, etc.)	<ul style="list-style-type: none"> • Browse the following website and create an account on each website <ul style="list-style-type: none"> ▪ Bayt.com – The Middle East Leading Job Site ▪ Monster Gulf – The International Job Portal ▪ Gulf Talent – Jobs in Dubai and the Middle East • Find the handy ‘search’ option at the top of your homepage to search for the jobs that best suit your skills. • Select the job type from the first ‘Job Type’ drop-down menu, next, select the location from the second drop-down menu. • Enter any keywords you want to use to find suitable job vacancies. • 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. • Search for jobs by: <ul style="list-style-type: none"> ▪ Company ▪ Category ▪ Location 	

		<ul style="list-style-type: none"> ▪ All jobs ▪ Agency 	
		Industry	
Week 23		Success stories (<i>For further detail please see Page No: 3& 4</i>) Kitchen / Recipe: Mixing of Raw Materials according to the Recipes & Cooking	Task-130 Task-131 Task-132 Task-133 Task-134 Task-135 Task-136
Week24		Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) Plant – Cooling Tunnels: Giving Shape to the materials	(Details may be seen at Annexure-I)
Week25		Success stories (<i>For further detail please see Page No: 3& 4</i>) Wrapping & Packing Wrapping of Chocolates as per requirements and packing into Boxes & Cartons	Task-137 Task-138 (Details may be seen at Annexure-I)
Week 26	Entrepreneurship and Final Assessment in project	Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) <ul style="list-style-type: none"> • Job Market Searching • Self-employment • Introduction • Fundamentals of Business Development • Entrepreneurship • Startup Funding • Business Incubation and Acceleration • Business Value Statement • Business Model Canvas • Sales and Marketing Strategies • How to Reach Customers and Engage CxOs • Stakeholders Power Grid • RACI Model, SWOT Analysis, PEST Analysis • SMART Objectives • OKRs • Cost Management (OPEX, CAPEX, ROCE etc.) Final Assessment	

	Projects & Final Assessment
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Annexure-I

Note: The following tasks are required to be performed multiple times by each trainee/group until sufficient proficiency level is acquired. The trainer is required to determine the number of times, each task needs to be repeated by a trainee as per his/her low/medium/high level of skill and proficiency during any stage of the course.

TASKS FOR Plant Operator

Task No.	Task Description	Week
1.	Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	Week-1
2.	Ensure that the work area is safe and hygienic for food processing	
3.	Dispose waste materials as per defined SOP and industry requirements	
4.	Check the working and performance of all machineries and tools used for production such as oven, slicer, proofer etc.	
5.	Clean the machineries and tools used with recommended sanitizers following the company specifications and standards	
6.	Place the necessary tools required for process	
7.	Attend to the minor repairs/ faults of all machines, if required	
8.	Read and understand the production order from the supervisor	
9.	Check the availability of raw materials and ingredients such as flour, sugar, shortenings, additives, preservatives, etc., packaging materials, working of machineries and availability of manpower	
10.	Calculate total weight of dough required for order quantity (considering process loss	
11.	Plan production sequence by: <ul style="list-style-type: none"> grouping similar type of products (hard and soft biscuits) grouping similar type of dough (hard and soft dough) grouping products that require similar process and process parameters grouping products that require same processing machineries planning maximum capacity utilization of machineries avoiding clean-in-place (CIP) after each type of product planning efficient utilization of resources/manpower prioritizing urgent orders 	
12.	Ensure the working and performance of each equipment required for the process	
13.	Calculate the process time for each batch for effective utilization of machineries	
14.	Plan batch size considering full capacity utilization of machineries	
15.	Allot responsibilities/ work to the assistants and helpers	
16.	Refer to the process chart/ product flow chart/formulation chart for product(s) produced	
17.	Refer to the work order and formulation and organize all the ingredients required for the order	Week-2

18.	Check the quality of each ingredient through physical parameters such as appearance, colour, odour, texture, etc. For its conformance to organization standards	
19.	Weigh and measure all ingredients such as flour, fat, water, sugar, additives, flavours, spices, etc. Required for product/batch and sift the ingredients manually (in manually operated unit)	
20.	Set and control metering devices that weigh, measure, sift, and convey each approved ingredients into the mixing machine for each ingredients such as flour, fat, water, sugar, additives, approved flavours and colours spices etc required for the product (in mechanized unit)	
21.	Check the scale indicators to confirm if specified amount of ingredients have been added	
22.	Mix all the ingredients manually to desired consistency	
23.	Transfer all the ingredients together or sequentially into the mixer depending on the method followed by the organization	
24.	Set the mixer speed, time and temperature depending on the mixing processes followed by the organization and start the mixer to mix and knead the ingredients to make hard/ soft dough for biscuits	
25.	Control the mixing time and mixing temperature which are critical for making hard/soft dough for biscuits	
26.	Check the dough consistency periodically until achieving dough of desired consistency	
27.	Ensure the correct forming and moulding of the dough	
28.	Set the required moulding roller/ cutter/ die	Week-3
29.	Set the controls of rotary cutter machine to cut the sheet of hard dough to desired size, shape and design as per specifications and standards of the organization	
30.	Set the controls of the conveyors to separate the cut hard dough and control scrap return	
31.	Set the controls of rotary cutter machine and start machine to mould soft dough to desired size, shape, weight and thickness as per specifications and standards of the organization (for soft dough)	
32.	Ensure correct transfer of dough pieces to the oven band	
33.	Pre-heat the oven and set the oven parameters such as baking temperature and baking time (batch process), load the filled pans /moulds in the oven and bake the dough monitoring oven parameters during baking process	Week-4
34.	Set and maintain the speed of the panning conveyor to control the shaped/moulded dough entering the tunnel oven (continuous process)	
35.	Set the oven parameters such as temperature, time, conveyor speed, etc. And monitor the oven parameters during baking process	
36.	Observe baking of biscuits through the observation window of the tunnel oven	
37.	Observe quality of baked biscuit coming out of oven through parameters such as color, aroma, texture, etc. To detect over baking /under baking and control oven parameters to achieve finished product of uniform quality	
38.	Clean the work area, machineries, equipment and tools using recommended cleaning agents and sanitizers	

39.	Wrap the Biscuits as per requirements.	Week-5
40.	Pack Biscuit into boxes and cartons.	
41.	Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	Week-6
42.	Ensure that the work area is safe and hygienic for food processing	
43.	Dispose waste materials as per defined SOP and industry requirements	
44.	Check the working and performance of all machineries and tools used for production.	
45.	Clean the machineries and tools used with recommended sanitizers following the company specifications and standards	
46.	Place the necessary tools required for process	
47.	Attend to the minor repairs/ faults of all machines, if required	
48.	Read and understand the production order from the supervisor	
49.	Check the availability of raw materials, packaging materials, equipment and manpower	
50.	Calculate total weight of dough required for order quantity (considering process loss	
51.	Plan production by sequence	
52.	Ensure the working and performance of each equipment required for the process	
53.	Calculate the process time for each batch for effective utilization of machineries	
54.	Plan batch size considering full capacity utilization of machineries	
55.	Allot responsibilities/ work to the assistants and helpers	
56.	Refer to the process chart/ product flow chart/formulation chart for product(s) produced	
57.	Perform Grinding, mixing and drying the latex.	Week-7 & Week-8
58.	Perform cooking and purifying the base.	
59.	Perform Blending additional ingredients.	
60.	Perform Kneading and rolling the gum.	Week-9
61.	Perform cutting process on gum roll.	
62.	Perform seasoning on bubblegum	Week-10
63.	Wrap the bubblegum as per requirements.	Week-11
64.	Pack bubblegum into boxes and cartons.	
65.	Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	Week-12
66.	Ensure that the work area is safe and hygienic for food processing	
67.	Dispose waste materials as per defined SOP and industry requirements	
68.	Check the working and performance of all machineries and tools used for production.	

69.	Clean the machineries and tools used with recommended sanitizers following the company specifications and standards	
70.	Place the necessary tools required for process	
71.	Attend to the minor repairs/ faults of all machines, if required	
72.	Read and understand the production order from the supervisor	
73.	Check the availability of raw materials, packaging materials, equipment and manpower	
74.	Calculate total weight of dough required for order quantity (considering process loss)	
75.	Plan production by sequence	
76.	Ensure the working and performance of each equipment required for the process	
77.	Calculate the process time for each batch for effective utilization of machineries	
78.	Plan batch size considering full capacity utilization of machineries	
79.	Allot responsibilities/ work to the assistants and helpers	
80.	Refer to the process chart/ product flow chart/formulation chart for product(s) produced	
81.	Move the ingredients from products hopper into the mixing and melting tank in specific quantities	Week-14
82.	program the machine to perform mixing, Heating and cooling functions according to production specification.	
83.	Perform quality control check on the compounding sample.	
84.	Mix the molten batch with starch to perform the following <ul style="list-style-type: none"> • Prevent molten mixture from sticking to the walls of the molding machine. • Hold gummy candy in the right place during the drying, setting and cooling process. • Absorb enough moisture from the candy leading to proper texture of the candy 	Week-15 & Week-16
85.	Use different shapes or molds to shape the batch accordingly	
86.	Wrap the Jellies as per requirements.	Week-17
87.	Pack Jellies into boxes and cartons.	
88.	Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	Week-18
89.	Ensure that the work area is safe and hygienic for food processing	
90.	Dispose waste materials as per defined SOP and industry requirements	
91.	Check the working and performance of all machineries and tools used for production.	
92.	Clean the machineries and tools used with recommended sanitizers following the company specifications and standards	
93.	Place the necessary tools required for process	

94.	Attend to the minor repairs/ faults of all machines, if required	
95.	Read and understand the production order from the supervisor	
96.	Check the availability of raw materials, packaging materials, equipment and manpower	
97.	Calculate total weight of dough required for order quantity (considering process loss)	
98.	Plan production by sequence	
99.	Ensure the working and performance of each equipment required for the process	
100.	Calculate the process time for each batch for effective utilization of machineries	
101.	Plan batch size considering full capacity utilization of machineries	
102.	Allot responsibilities/ work to the assistants and helpers	
103.	Refer to the process chart/ product flow chart/formulation chart for product(s) produced	
104.	Move the ingredients from products hopper into the mixing and melting tank in specific quantities	Week-19
105.	Send the dissolved mixture into vacuumed cooker for cooking process.	
106.	Place cooked mixture on the cooling table.	
107.	Adds food coloring, organic acid, and spices into the cooker mixture on the cooling table	
108.	Send the mixture into batch roller to form into sticks	Week-20
109.	Pass these sticks through sizing roller to form specified size.	
110.	Make specified type of hard candy with the help of forming machine.	
111.	Move the formed candy to cooling conveyor for cooling purpose	
112.	Wrap the candies as per requirements.	Week-21
113.	Pack candies into boxes and cartons.	
114.	Clean and maintain the cleanliness of the work area using approved sanitizers and keep it free from dust, waste, flies and pests	Week-22
115.	Ensure that the work area is safe and hygienic for food processing	
116.	Dispose waste materials as per defined SOP and industry requirements	
117.	Check the working and performance of all machineries and tools used for production.	
118.	Clean the machineries and tools used with recommended sanitizers following the company specifications and standards	
119.	Place the necessary tools required for process	
120.	Attend to the minor repairs/ faults of all machines, if required	
121.	Read and understand the production order from the supervisor	
122.	Check the availability of raw materials, packaging materials, equipment and manpower	
123.	Calculate total weight of dough required for order quantity (considering process	

	loss	
124.	Plan production by sequence	
125.	Ensure the working and performance of each equipment required for the process	
126.	Calculate the process time for each batch for effective utilization of machineries	
127.	Plan batch size considering full capacity utilization of machineries	
128.	Allot responsibilities/ work to the assistants and helpers	
129.	Refer to the process chart/ product flow chart/formulation chart for product(s) produced	
130.	Weight the desired quantity of granulated sugar and put into crushing machine.	Week-23 & Week-24
131.	Weight the desired quantity of cleaned cocoa and cocoa mass and put into melting Kettle.	
132.	Combine the crushed sugar and melted cocoa butter and cocoa mass in mixing machine along with flavoring, milk powder, and coca powder to obtain homogeneous mix.	
133.	Put the mixture in to rolling machine and ground to fine powder.	
134.	Send the powder into refinery machine and add palm oil and flavoring to achieve the chocolate flavor.	
135.	Pumped the chocolate paste into storage tank form refinery machine.	
136.	Inject the chocolate past into chocolate mold by filling machine and carried away for reforming by; the vibrator conveyor.	
137.	Wrap the chocolate as per requirements.	
138.	Pack choclote into boxes and cartons.	

Home Assignment

Designing Effective Homework

To achieve a positive impact on student learning, homework assignments must be well-designed and carefully constructed. Some specific research findings include:

- ▶ Homework is most effective when it covers material already taught.
- ▶ Homework is most effective when it is used to reinforce skills learned in previous weeks or months.
- ▶ Homework is less effective if it is used to teach complex skills.

Characteristics of Good Assignments

When teachers plan homework, they should consider the characteristics listed below:

- ▶ Provide clear instructions for students;
- ▶ Can be completed successfully;
- ▶ Are not too long;
- ▶ Can be completed within a flexible time frame;
- ▶ Use information and materials that are readily available;
- ▶ Reinforce and allow practice of previously taught skills;
- ▶ Must not be unfinished class work;
- ▶ Are interesting to students and lead to further exploration and study;
- ▶ Stimulate creativity and imagination in the application of skills;
- ▶ Stimulate home and class discussion

Homework Don'ts

Do not assign homework that:

- ▶ Is unfamiliar, boring or impossible to do
- ▶ Requires complex skills or requires unreasonable time frames
- ▶ Is a “time filler” to keep students busy or a punishment for not doing class work
- ▶ Do not wait until the last minute to organize and assign the *homework (You may give useless or impossible tasks and/or giving inadequate directions)*
- ▶ Do not assume that all homes have equal resources, that all parents have equal skills and talents to support their children as learners
- ▶ Do not collect any homework you do not intend to check, review or grade.
- ▶ Do not assign homework that is so difficult and unfamiliar to students that their parents are tempted to:
 - Do the work for them;
 - Accuse their children of being inattentive in class; or
 - Accuse their children of failing.

Plant Operator

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

<https://www.youtube.com/watch?v=9jCJN3Ff0kA>

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

21 Yr Old Pakistani Fiverr Millionaire | 25-35 Lakhs a Month Income | Interview

<https://www.youtube.com/watch?v=9WrmYYhr7S0>

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

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

Workplace/Institute Ethics Guide

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 importance of work and manifested by determination or desire to work hard.

The following ten work ethics are defined as essential for employee's 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 own weight and help others who are struggling. Recognize when to speak up with an ideas 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 life time

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 you 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. Takes 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 workplace 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. Respects diversity in the workplace, including showing due respect for different perspectives, opinions and suggestions.

Suggestive Format and Sequence Order of Success Story

S. No	Key Information	Detail/Description
1.	Self & Family background	<ul style="list-style-type: none"> • Self-introduction • Family background and socio economic status, • Education level and activities involved in • Financial hardships etc
2.	How he came on board NAVTTC Training/ or got trained through any other source	<ul style="list-style-type: none"> • Information about course, apply and selection • Course duration, trade selection • Attendance, active participation, monthly tests, interest in lab work
3.	Post training activities	<ul style="list-style-type: none"> • How job / business (self-employment) was set up • How capital was managed (loan (if any) etc). • Detail of work to share i.e. where is job or business being done; how many people employed (in case of self-employment/ business) • Monthly income or earnings and support to family • Earning a happy life than before
4.	Message to others (under training)	<ul style="list-style-type: none"> • Take the training opportunity seriously • Impose self-discipline and ensure regularity • Make Hard work pays in the end so be always ready for the same.

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

1. To call a passed out successful person of institute. He/she will narrate his/her success story to the trainees in his/her own words and meet trainees as well.
2. To see and listen to a recorded video/clip (5 to 7 minutes) showing a successful person 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 per month etc) and narrates his/her story in teacher's own motivational words.