Government of Pakistan

National Vocational and Technical Training Commission

Prime Minister's Youth Skill Development Program (PMYSDP)

"Skills for All"

Course Contents / Lesson Plan
Course Title: Printing & Packaging Technology
Duration: 3 Months

Trainer Name	
Author	**Muhammad Arslan, Cluster Manager, PSIC**
Course Title	**Printing & Packaging Technology**
Objectives and Expectations	**Employable skills and hands-on practice in AI (Robotics)** 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. 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. **Main Expectations:** 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. 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. 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. To materialize the main expectations, a special module on **Job Search & Entrepreneurial Skills** has been included in the latter 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 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.

iii. A module on **Work Place Ethics** has also been included to highlight the importance of good and positive behavior in the workplace 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 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 comprehendible 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.

The 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) iii. Field visits(At least one visit to a trade-specific major industry/ site must be arranged by the training institute)
Entry-level of trainees	Intermediate / Matric Science
Learning Outcomes of the course	By the end of this course, students will be able to: • Basics of Printing • Printing Press Setup and Maintenance • Interpret instructions on docket for packaging • Lamination operation • Pasting Operation • Die cutting operation • Embossing • Cutting & Trimming, Hot foil stamping, Envelop making • Quality inspection, Entrepreneurship and Final Assessment
Course Execution Plan	The total duration of the course: **3 months (12 Weeks)** Class hours: **4 hours per day** Theory: **20%** Practical: **80%** Weekly hours: **20 hours per week** Total contact hours: **260 hours**
Companies offering jobs in the respective trade	Individuals who have completed a vocational training course in printing and packaging technology will be equipped with skills that are valuable in a variety of industries. Here are some types of companies and sectors that often seek professionals with expertise in printing and packaging technology: **Printing Companies:** • Commercial Printing: Companies specializing in commercial printing services, including brochures, catalogs, magazines, and promotional materials. • Digital Printing: Firms that focus on digital printing solutions for short-run and variable data printing. • Packaging Printing: Companies involved in printing packaging materials, labels, and other packaging components. **Packaging Companies:** • Packaging Manufacturers: Businesses that design and produce packaging solutions for various industries, such as food and beverage, pharmaceuticals, cosmetics, and consumer goods. • Flexible Packaging: Companies specializing in flexible packaging materials like pouches and bags. • Corrugated Packaging: Firms involved in the production of corrugated boxes for shipping and product packaging. **Print Management Companies:** • Companies that provide print management services to clients, overseeing the entire print process, from design to production. **Advertising and Marketing Agencies:** • Agencies that require professionals with printing and packaging

	expertise to design and produce marketing collateral. **Graphic Design Studios:** - Studios focused on graphic design and branding, where knowledge of printing and packaging technology is essential for creating visually appealing and effective designs. **Label and Specialty Printing:** - Companies specializing in the production of labels, decals, and specialty prints for various applications. **Manufacturing and Consumer Goods Companies:** - Companies involved in the manufacturing of products that require packaging, including electronics, pharmaceuticals, and beauty products. **Print Equipment Manufacturers and Suppliers:** - Manufacturers and suppliers of printing and packaging equipment, where professionals can work in sales, technical support, or product development. **E-commerce Companies:** - Companies with in-house packaging and printing operations to create branded packaging for shipped products. **Corporations with In-House Printing Departments:** - Large corporations with significant printing needs for internal documentation, marketing materials, and packaging. **Custom Printing and Packaging Services:** - Businesses that offer customized printing and packaging services for clients with unique requirements. **Environmental and Sustainable Packaging Organizations:** - Companies focusing on environmentally friendly and sustainable packaging solutions. **Print and Packaging Software Development:** - Companies developing software solutions related to printing and packaging design, management, and workflow optimization. **Print and Packaging Trade Associations:** - Organizations that represent the interests of professionals in the printing and packaging industry. **Startups in Printing Technology:** - Innovative startups working on new technologies and approaches within the printing and packaging space.
Job Opportunities	1. Prepress Technician 2. Graphic Designer 3. Printing Press Operator 4. Color Management Specialist 5. Packaging Designer 6. Print Production Coordinator 7. Quality Control Inspector 8. Packaging Technician 9. Print Sales Representative 10. Print and Packaging Technologist 11. Print Production Supervisor 12. Digital Print Operator 13. Print and Packaging Sales Representative

	14. Customer Service Representative (Printing and Packaging) 15. Print and Packaging Industry Trainer/Instructor 16. Entrepreneur (Print or Packaging Business)
No of Students	25
Learning Place	Classroom / Lab
Instructional Resources	**1. Textbooks:** • "Introduction to Printing and Packaging" by Robert L. Feller. • "Packaging Technology: Fundamentals, Materials, and Processes" by Anne Emblem and Henry Emblem. • "Color Management: Understanding and Using ICC Profiles" by Abhay Sharma. **2. Industry Journals and Magazines:** Subscribe to journals like "Printing Industries of America: The Magazine" and "Packaging World" to stay updated on industry trends and best practices. **3. eLearning Platforms:** Utilize platforms like Coursera, edX, or LinkedIn Learning for additional online courses and resources related to printing and packaging technology. **4. Printing Industries of America (PIA)** • **Website:** Printing.org • **Brief Detail:** PIA is a trade association that provides resources, training, and information for professionals in the printing industry. The website offers valuable insights, research, and educational materials. **5. Esko** • **Website:** Esko • **Brief Detail:** Esko provides software solutions for packaging design, prepress, and collaboration. Their website offers product information, webinars, and resources for professionals in the packaging and printing fields. **6. X-Rite** • **Website:** X-Rite • **Brief Detail:** X-Rite specializes in color management solutions. The website provides information on color calibration tools, software, and educational resources for achieving accurate color reproduction in printing. **7. Packaging World** • **Website:** Packaging World • **Brief Detail:** Packaging World is a comprehensive resource for packaging professionals. The website covers industry news, trends, case studies, and product reviews related to packaging technology. **8. PrintPlanet** • **Website:** PrintPlanet • **Brief Detail:** PrintPlanet is an online community and forum for professionals in the printing industry. It provides a platform for

discussions, sharing insights, and staying updated on industry news and technology.

9. **Printing Impressions**
   - **Website:** Printing Impressions
   - **Brief Detail:** Printing Impressions is a source for news, trends, and insights in the printing industry. The website covers various aspects of print technology, business strategies, and industry events.

10. **International Paper**
   - **Website:** International Paper
   - **Brief Detail:** International Paper is a leading packaging and paper company. The website offers information on sustainable packaging solutions, products, and industry trends.

11. **Idealliance**
   - **Website:** Idealliance
   - **Brief Detail:** Idealliance is a global organization focused on advancing media production and color management standards. The website provides resources, certifications, and training programs for professionals in the printing and packaging industries.

12. **PrintingNews.com**
   - **Website:** PrintingNews.com
   - **Brief Detail:** PrintingNews.com is a platform that delivers news, product reviews, and insights related to the printing industry. It covers topics such as technology, equipment, and industry events.

13. **Inkish TV**
   - **Website:** Inkish TV
   - **Brief Detail:** Inkish TV is an online platform that features video content related to the printing and packaging industry. It includes interviews, technology demonstrations, and insights from industry experts.

MODULES

Schedu led Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
Week 1	Basics of Printing	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	
			Hour 3 to 4	**Course Introduction**	
		Day 2	Hour 1 to 2	• **Job market** Survey career opportunities	• **Task 1 to 8**
			Hour 3 to 4	**Safety practices in the workshop**	
		Day 3	Hour 1 to 4	**Introduction to tools and equipment** Students will be familiarized	*Details may be seen at Annexure-I*
		Day 4	Hour 1 to 4	with different tools and their uses in printing and packaging technology	
		Day 5	Hour 1 to 4	History and Evolution of Printing Technology	
Week 2	Basics of Printing(Contd. .)	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	
			Hour 3 to 4	**Introduction to Printing Methods** Introduce various printing methods such as offset, flexography, and digital printing.	
		Day 2	Hour 1 to 4	**Key Components and Processes of Printing** Fundamental components of printing systems and the processes involved.	• **Task 9 to 14** *Details may be seen at Annexure-I*
		Day 3	Hour 1 to 4	**Printing Materials and Substrates** Understand the different materials used in printing, including paper, plastics, and metals.	
		Day 4	Hour 1 to 4	**Printing Press Setup and Configuration** Configuring and setting up	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
				a printing press.	
		Day 5	Hour 1 to 4	**Maintenance Procedures and Troubleshooting** Routine maintenance and common troubleshooting techniques in printing presses.	
Week 3	**Printing Press Setup and Maintenance**	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	
			Hour 3 to 4	**Color Management** Understand the importance of color in printing and how it is managed.	
		Day 2	Hour 1 to 4	**Color Calibration Techniques** Exercises on calibrating colors for accurate reproduction	
		Day 3	Hour 1	**Overview of Digital Printing Processes** Basics of digital printing and its applications	• **Task 15** *Details may be seen at Annexure-I*
		Day 4	Hour 1 to 4	**Introduction to 3D Printing and its Applications** Learn about 3D printing technologies and their applications in the printing industry.	
		Day 5	Hour 1 to 4	**Innovations in Printing Technology** Investigate recent innovations and emerging technologies in the printing field	
Week 4	**Printing Press Setup and Maintenance (Contd..)**	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	• **Task 16** *Details may be seen at Annexure-I*
			Hour 3 to 4	**Principles of Effective Packaging Design**	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
		Day 2	Hour 1 to 4	**Software Tools for Packaging Design** Introduce software tools such as Adobe Illustrator for packaging design	
		Day 3	Hour 1 to 4	**Prepare the surface for printing** Types of printing surfaces Stripping Chemical used for surface preparation Image formation for different printing processes finishing the Surface	
		Day 4	Hour 1 to 4	**Perform Dry run** • Define dry run.	
		Day 5	Hour 1 to 4	**Record of humidity in press room** • define humidity, • describe importance of manage humidity in press room environment, • Enlist method of humidity management	
Week 5	Interpret instructions on docket for packaging	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	
			Hour 3 to 4	**Determining job order details** • Importance of docket/job card and its interpretation • Enlist information available on docket/job card.	• **Task 17 to 28** *Details may be seen at Annexure-I*
		Day 2	Hour 1 to 4		

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
		Day 3	Hour 1 to 4	**Verify artwork/sample for packaging.** • Define artwork in printing industry. • State importance of maintaining viscosity of glue	
		Day 4	Hour 1 to 4	**Verify material quality for packaging.** • Define applications of coatings. • Define traceability marks. • Define GSM values. • Describe effects of variation in GSM values.	
		Day 5	Hour 1		
Week 6	**Interpret instructions on docket for packaging (Contd..)**	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	• **Task 29 to 38** _Details may be seen at Annexure-I_
			Hour 3 to 4	**Verify substrate sizing.** • Describe substrate. • State method of checking substrate sizes. • Describe effect of size variation on substrate. • State substrate trimming procedure. • Define grain of substrate and its importance	
		Day 2	Hour 1 to 4		
		Day 3	Hour 1 to 4		
		Day 4	Hour 1 to 4	**Verify die as per docket.** Define die and block.	
		Day 5	Hour 1 to 4	**Verify Block as per docket** State precautions to be taken in die and block handling.	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
Week 7	Lamination operation	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	
			Hour 3 to 4	**Perform Substrate handling** • Define Importance of the substrate stacking. • Describe the Importance of the front- lay & side-lay.	
		Day 2	Hour 1 to 4		
		Day 3	Hour 1 to 4	**Verify Lamination films as per dockets.** • Enlist the types of lamination film.	
		Day 4	Hour 1 to 4	**Make ready workstation for lamination operation!** • Enlist the main parts of machine. • Importance of maintaining viscosity of the glue. **Perform lamination operation.** • Quality checks of the lamination process **Perform post production activity** • Importance of the cleaning after lamination • Technique involved in sheet separation process. **Maintain log Book.** Importance of record keeping	Task 39 to 60 _Details may be seen at Annexure-I_
		Day 5	Hour 1 to 4		
Week 8	Pasting Operation	Day 1	Hour 1 to 2	**Motivational Lecture (For**	• Task

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
				further detail please see Page No: 26)	61 to 84 *Details may be seen at Annexure-I*
			Hour 3 to 4	**Perform Substrate handling.** Define Importance of the substrate stacking.	
		Day 2	Hour 1 to 4	**Make ready workstation for pasting operation** • State health and safety precautions of the pasting machine • Identify glue flap. • Identify purpose of glue viscosity • Describe purpose of feeder station	
		Day 3	Hour 1 to 4	**Perform pasting operation** • Describe purpose of Pre-glue station • Describe purpose of glue pot station. • Describe purpose of Post-glue station. • Describe purpose of Delivery station. • Describe the importance of glue position on glue flap	
		Day 4	Hour 1 to 4	**Perform postproduction activity** Describe the importance of maintaining/cleaning of workstation	
		Day 5	Hour 1 to 4	**Maintain Log book** Importance of record keeping.	
Week 9	Die cutting operation	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	• Task 85 to 111 *Details may be seen at*
			Hour 3 to 4	**Perform Substrate handling**	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
		Day 2	Hour 1 to 4	- Define side lay and front lay. - Define Importance of the substrate stacking **Verify Die as per dockets** Define creasing matrix.	*Annexure-I*
		Day 3	Hour 1 to 4	**Make ready workstation for die cutting operation** - Describe elements of make ready for a new die cutting job - Describe the purpose of fanning. - Describe the importance of creasing, rule thickness and height.	
		Day 4	Hour 1 to 4	**Perform die cutting operation** Describe die cutting operation.	
		Day 5	Hour 1 to 4	**Perform post production activity** Describe the importance of maintaining/cleaning of work station **Maintain log Book** Importance of record keeping.	
Week 10	**Embossing**	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	**Task 112 to 132** *Details may be seen at Annexure-I*
			Hour 3 to 4	**Perform Substrate handling** - Identify side lay and front lay. - Describe the purpose of fanning	
		Day 2	Hour 1 to 4		
		Day 3	Hour 1 to 4	**Make ready workstation for Embossing** Describe the procedure of mounting of block on die.	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
				• Describe the importance of block thickness and height.	
		Day 4	Hour 1 to 4	**Perform Embossing operation** Describe Embossing operation	
		Day 5	Hour 1 to 4	**Perform postproduction activity** • Describe the importance of maintaining/cleaning of work station **Maintain log Book** Importance of record keeping	
Week 11	**Cutting & Trimming** **Hot foil stamping** **Envelop making**	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	**Task 133 to 184** *Details may be seen at Annexure-I*
			Hour 3 to 4	**Perform Substrate handling** Describe types of substrate	
		Day 2	Hour 1 to 4	**Make ready workstation for cutting and trimming operation.** • List the programing parameters • Understand the use of measuring instrument (scale, calculator, weight machine)	
		Day 3	Hour 1 to 4	**Perform cutting and trimming operation** • Describe the standard paper sizes **Maintain log book.** Importance of record keeping	
		Day 4	Hour 1 to 4	**Perform Substrate handling** • Identify side lay and front lay	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
				• Describe the purpose of fanning **Make ready workstation for hot foiling** • Describe make ready of a Hot Foil job. • Describe the procedure of mounting of block on honeycomb chase • Describe the importance of block thickness and height **Perform Hot Foil operation** • State Safety precautions of the Hot Foil machine • Describe how to calculate the hot foil pull after each impression **Perform post production activity** • Describe the importance of maintaining/cleaning of work station. **Maintain log Book** Importance of record keeping	
		Day 5	Hour 1 to 4	**Perform Substrate handling** • Define Importance of the substrate stacking. **Make ready workstation for envelop making operation** Describe the types of envelop	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
				Perform envelop making operation • Understand the importance of glue viscosity. **Perform post production activity** • Describe the importance of maintaining/cleaning of work station **Maintain log Book** Importance of record keeping.	
Week 12	Quality inspection Entrepreneurship and Final Assessment	Day 1	Hour 1 to 2	**Motivational Lecture (For further detail please see Page No: 26)**	• **Task 185 to 197** _Details may be seen at Annexure-I_ **Final Project**
			Hour 3 to 4	**Carryout Printing Inspection** • Define knowledge of substrate. • Understand the purpose of quality control • Define importance of grain **Carryout Publishing Inspection** Understand the use of measuring instrument	
		Day 2	Hour 1 to 4	**Carryout Packaging Inspection** • Describe types of glue. • Define binding material. **Maintain Test record** How to fill quality check list	
		Day 3	Hour 1 to 4	• Job Market Searching • Self-employment • Introduction • Fundamentals of Business Development	

Scheduled Weeks	Module Title	Days	Hours	Learning Units	Home Assignment
				• 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.)	
		Day 4		**Final Assessment**	
		Day 5			

Tasks for Printing & Packaging Technology

Task No.	Learning Unit	Week	Task Description
1	Basics of Printing	Week 1	Interpret work processes and procedures to identify risk of hazards at printing press
2			Recognize printing processes, tools, equipment and consumable materials that have the potential to cause harm,
3			Identify potential hazards to minimize accident risk
4			identify OHS hazards in printing press to prevent from accidents potential for
5			demonstrate housekeeping in the workplace by cleaning up spills or leaks
6			Perform cleaning of the machine as per OEM manual.
7			Perform cleaning of associated tools as per press room SOPs.
8			Perform periodic cleaning as per duty chart.
9		Week 2	Compare quality of oil in machine with quality recommended in machine manual.
10			Maintain oil level as per machine specifications
11			Perform Dry run procedure on post press machine as per instruction.
12			Verify dry run through test run
13			Verify humidity of press room as per press room SOPs.
14			Apply humidity management techniques in press room.
15	Printing Press Setup and Maintenance	Week 3	Calibrate colors for optimal reproduction.
16		Week 4	Take part in a complete press setup
17	Interpret instructions on docket for packaging	Week 5	Determine job title from docket/job card.
18			Verify availability of reference specimen in docket/job card.
19			Determine quantity of job as per docket/job card requisition.
20			Determine coating applications on from docket/job card.
21			Verify artwork as per docket.
22			Verify pasting application as per dummy.
23			Determine substrate type as per docket/job card.
24			Determine grain of substrate as per docket/job card.
25			Determine Gram per Square Meter (GSM) value of substrate as docket/job card
26			Determine thickness of substrate as per docket.
27			Verify size of substrate as per docket/job card.
28			Verify trimming of substrate as per requirement.
29		Week 6	Verify die size as per specimen.

Task No.	Learning Unit	Week	Task Description
30			Verify number of Ups as per docket.
31			Verify dimension of Ups as per docket.
32			Verify block size as per specimen.
33			Verify number of Ups as per docket.
34			Verify type of block as per docket.
35			Verify side-lay & front-lay of the printed substrate.
36			Perform Substrate Stacking
37			Verify the side of lamination.
38			Verify the Substrate size for lamination
39			Verify the type of the lamination film.
40			Verify the thickness of the lamination film.
41			Verify size of the lamination film roll.
42			Adjust the feeder according to the job
43			Mount the film roll on to the machine.
44			Mount the delivery drum on the machine
45			Mount the conveyer blanket as per instruction.
46			Adjust the viscosity of the glue in a container as per job requirement
47			Mount the glue pot & fill-up with the glue
48			Adjust the front-lay & the side-lay
49	Lamination operation	Week 7	Adjust the flow of glue Perform test run
50			Maintain viscosity of the glue during the lamination
51			Adjust the speed as per substrate
52			Check & maintain the quality of lamination
53			Maintain the Glue level in the glue pot
54			Remove the delivery drum from the machine as per instruction
55			Clean the roller as per instruction
56			Empty & clean glue pot
57			Clean-up the feeder conveyor blanket (Clean machine and tool as per instruction)
58			Perform sheet separation
59			Record the final counter along-with the wastages
60			Record downtime during
61			Verify glue flap of the die cut substrate
62			Perform Substrate Stacking as per instruction.
63	Pasting Operation	Week 8	Verify the thickness/GSM value of the substrate as per docket.
64			Verify the Length and width of the skillet/unit box as per docket.
65			Adjust the feeder according to the job

Task No.	Learning Unit	Week	Task Description
66			Adjust pre-glue / pre-fold belts according to the job
67			Adjust glue flap folding station according to the job
68			Adjust 3rd fold station according to the job
69			Adjust glue pot station according to the job
70			Adjust post-glue belts according to the job.
71			Adjust the impression and speed of delivery belt as per job requirement
72			Adjust Glue viscosity as per job requirement
73			Adjust flow of glue as per job requirement
74			Adjust the delivery conveyer belt pressure as per job requirement.
75			Adjust the counter photocell and kick according to the job
76			Perform test run
77			Carry out pasting operation asper instruction
78			Check & maintain the quality of pasting
79			Remove the Glue pot from the machine as per instruction
80			Clean the glue pot as per instruction
81			Remove the pile form feeder and delivery.
82			Clean the machine & workplace
83			Record the final counter along-with the wastages
84			Record downtime during die cutting operation.
85			Verify side-lay & front-lay of the printed substrate
86			Verify the GSM of the substrate as per docket.
87			Verify thickness of substrate as per docket.
88			Verify substrate size as per docket.
89			Verify the grain of substrate as per docket.
90			Perform Substrate Stacking as per instruction.
91			Verify the die ups as per docket
92			Verify creasing matrix requirement as per thickness of the substrate
93	Die cutting operation	Week 9	Perform nicking on cutting blade as per instruction
94			Set the die rubber on to the die
95			Mount the die on to the machine chase.
96			Mount machine chase on die cutting machine
97			Set the creasing matrix on the creasing rule.
98			Make position setting of die with the help of cuttingpaper paper/Carbon
99			Perform Substrate Stacking in to the feeder
100			Adjust the head-lay & the side-lay
101			Adjust the impression as per job requirement
102			Adjust the feeder according to the job

Task No.	Learning Unit	Week	Task Description
103			Perform test run
104			Carry out cutting operation as per instruction
105			Check & maintain the quality of die cutting.
106			Remove the die and cutting plate from the machine as per instruction
107			Clean the cutting plate as per instruction
108			Remove the pile form feeder and delivery.
109			Clean the machine & workplace
110			Record the final counter along-with the wastages
111			Record downtime during die cutting operation
112	Embossing	Week 10	Verify side-lay & front-lay of the printed substrate
113			Perform Substrate Stacking as per instruction.
114			Verify the thickness and GSM value of the substrate.
115			Verify the foil color, type and size as per docket
116			Set the Embossing block on to the die
117			Adjust the feeder according to the job
118			Perform Substrate stacking in to the feeder
119			Adjust the front-lay & the side-lay
120			Mount the die on to the machine
121			Fix the counter block on the impression plate.
122			Adjust the registration as per registration mark.
123			Adjust block impression as per instruction
124			Perform test run
125			Carry out Embossing operation as per instruction
126			Check & maintain the quality of Embossing
127			Remove the die and Impression plate from the machine as per instruction
128			Clean the cutting plate as per instruction
129			Remove the pile form feeder and delivery.
130			Clean the machine & workplace
131			Record the final counter along-with the wastages
132			Record downtime during die cutting operation
133	Cutting & Trimming	Week11	Verify grain of the substrate
134			Verify Gram per square meter (GSM) of the substrate
135			Prepare paper stacking/jogging
136			Fix cutting knife as per instruction.
137			Adjust knife impression as per instruction
138			Verify cutting knife fixing.
139			Fix cutting stick in machine as per OEM.
140			Feed cutting program as per docket.

Task No.	Learning Unit	Week	Task Description
141			Make a sample trim/cut for approval from supervisor.
142			carryout cutting/trimming operation as per instruction
143			Stack the finished items on pallets as per instruction.
144			Store the segregated trimmed waste at the designated bin.
145			Clear the workstation
146			Record the final count along with the wastages
147			Record the down time
148			Verify side-lay & front-lay of the printed substrate
149			Perform Substrate Stacking as per instruction.
150			Verify the thickness and GSM value of the substrate.
151			Verify the foil color, type and size as per docket.
152			Set the Hot foil Block on to the honeycomb chase.
153			Adjust the feeder according to the job
154			Perform Substrate Stacking in to the feeder
155			Adjust the head-lay & the side-lay
156			Mount the honeycomb chase on to the machine
157			Fix the Counter hot foil block / Hot foil impression plate on the plate impression
158	Hot Foil Stamping	Week 11	Adjust the registration and impression as per job requirement
159			Calculate hot foil pull and adjust the foiling unit.
160			Perform test run
161			Carry out Hot Foil operation as per instruction
162			Check & maintain the quality of Hot Foil
163			Remove the foil block and Impression plate from the machine as per
164			Instruction
165			Remove the pile form feeder and delivery.
166			Clean the machine & workplace
167			Record the final counter along-with the wastages
168			Record downtime during die cutting operation
169			Verify substrate as per docket.
170			Perform stacking of envelop as per instruction
171			Prepare work station as per instruction.
172			Prepare glue viscosity as per envelope substrate.
173	Envelop Making	Week 11	Prepare glue viscosity as per window film.
174			Perform crease folding as per instruction.
175			Paste window film before envelop pasting.
176			Apply glue on pasting flap of substrate as per instruction
177			Perform test run
178			Get approval from the supervisor.

Task No.	Learning Unit	Week	Task Description
179			Carry out envelop making operation as per instruction
180			Check & maintain the quality of envelop making operation
181			Remove the waste material as per instruction
182			Clean the work station as per instruction
183			Record the final counter along-with the wastages
184			Record downtime during folding machine operation
185	Quality Inspection	Week 12	Verify lock alignment.
186			Verify lamination / coating.
187			Verify Pasting strength
188			Verify folded crease quality.
189			Verify glue viscosity.
190			Verify cutting test of skillet/unit box.
191			Verify grain direction as per approved sample.
192			Verify perforation test (tear test/light passing method) as per instruction
193			Verify foiling impression as per approved sample.
194			Verify board moisture value.
195			Record Physical Publishing Inspection test results
196			Record Physical Packaging Inspection test results
197	How to search and apply for jobs in at least two labor marketplace countries (KSA, UAE, etc.)	Week 12	☐ Browse the following website and create an account on each website
			i. Bayt.com – The Middle East Leading Job Site
			ii. Monster Gulf – The International Job Portal
			iii. Gulf Talent – Jobs in Dubai and the Middle East
			iv. 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:
			i. Company
			ii. Category
			iii. Location
			iv. All jobs

Task No.	Learning Unit	Week	Task Description
			v. Agency

Motivational Lectures
Printing & Packaging Techology

What Is the Role of Good Manners in the Workplace? By Qasim Ali Shah | In Urdu
https://www.youtube.com/watch?v=Qi6Xn7yKIlQ

The success story of Nimra, a proud student of Professional Photography and Documentary Ad Making
Memon Industrial & Technical Institute (A Project of World Memon Organization - WMO) is delighted to share the success story of Nimra, a proud student of Professional Photography and Documentary Ad Making to the program of (National Vocational and Technical Training Commission (NAVTTC) - UNHCR SKILL DEVELOPMENT PROGRAM 2023 (COHORT-E).
https://youtu.be/uIAqP0S2UZs?si=4OTXHyhhbKgyZAJz

Packaging Success Stories in 10 minutes
I'm sharing tips about conducting market research before you begin a design project, new technology that is accessible to small brands, ways to extend your mission of sustainability into your packaging choices, leading your packaging design process with your brand strategy, and how a package redesign project directly impacted the sales success of a small regional brand.
https://youtu.be/hLD7KJHDCe4?si=wR-kHXy3SIilN2t4

Tech meets print: Surprising success stories you won't believe
Dive into the fascinating world where technology blends seamlessly with the printing industry. This video showcases three compelling case studies, each narrating a different success story. Our clients, leveraging our innovative products, have achieved remarkable results, each in their own unique way.
https://youtu.be/ddrIIPvexcc?si=3-pgqub7NJkRgOhC

Life as a Mom and a Successful Etsy Print on Demand Store Owner! Success Story Ahavti Life Style
Liora Goren, a proud mother of four children and a successful vacation rental owner never gave up on her dream. In a little over a year, her e-commerce store called Ahavti LifeStyle that offers home décor items, like bath mats, clocks, shower curtains and much more became a major success.
https://youtu.be/MWwuu1xzroI?si=F4i7Jo-bwryOOQjo

Success Stories: Graphic Packaging International
Join us as we explore how Graphic Packaging International efficiently manages its production processes using the revolutionary @PlanettogetherAPS software. With APS, they have found the perfect solution to streamline their operations, optimize resources, and achieve exceptional productivity.
https://youtu.be/tBs-LTEBzwU?si=lOcgmHHwyU40B_ZA

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