

Government of Pakistan

National Vocational and Technical Training Commission

Prime Minister's Hunarmand Pakistan Program

"Skill for All"



Course Contents / Lesson Plan

Course Title: HEALTH, SAFETY & ENVIRONMENT (HSE)

Duration: 3 Months

Course Details / Description & Preliminaries

Course Title	HEALTH, SAFETY & ENVIRONMENT (HSE)
Objectives and Expectations	<p data-bbox="383 323 1502 415"><u>Employable skills for FSC/ DAE through an intensive course on Health, Safety and Environment</u></p> <p data-bbox="383 499 1502 877">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 data-bbox="383 961 1502 1224">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 data-bbox="383 1251 673 1283"><u>Main Expectations:</u></p> <p data-bbox="383 1310 1502 1514">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 data-bbox="383 1541 1502 1864">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</p>

**Key Features
of Training &
Special
Modules**

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. 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 favoured labour 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 puts his heart and soul into these otherwise non-technical components, the

<p>Training Tools/ Methodology</p>	<p>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 Lecture • 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 style="text-align: center;">(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. • Ending Points to persuade the trainees on changing themselves.
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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 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 at 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 class room 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 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.

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.

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

	<p>industrial 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>
Intake to the Training	<p>The candidate must;</p> <ul style="list-style-type: none"> • Possess FSc/DAE or above qualification. • Be able and willing to carry out different types of analytical studies at field.
Learning Outcome of the Course	<p>On completion of the course, candidate should:</p> <ul style="list-style-type: none"> • Have good knowledge of Health and safety responsibilities and accountabilities • Be able to recognize safety and health hazards present in the workplace • Be able to carry out and record risk assessments of hazards at workplace • Be able to recommend suitable control measures according to Risk Assessment • Be able to recommend and execute necessary Personal Protective Equipment (PPEs) at workplace • Be able to recommend necessary Safety Signs at workplace • Be able to investigate Accidents and Incidents at workplace • Be able to able to provide necessary First AID in an emergency situation • Have workable knowledge of necessary Emergency Procedures • Have workable knowledge of Fire Safety Management • Be able to measure health and safety performance • Have basic knowledge of international standard for OH&S and Environmental Management System i.e. ISO 45001-2018 and ISO 14001:2015.
Course Execution Plan	Total Duration of Course: 3 Months /13 Weeks
	Class Hours: 5 Hours per day (05 Days/Week)

	Theory: 20% Practical: 80%
	Weekly Hours: 25 Hours Per week
	Total Contact Hours: 325 Hours
Companies Offering Jobs in the respective trade	<p>Managing HSE is one of the basic requirements of almost every organization. However, some of the most favorable sectors for an HSE professional are;</p> <ul style="list-style-type: none"> • Construction • Energy • Oil & Gas • Mining • Manufacturing (Discrete as well as Continuous) etc.
Job Opportunities	In developed countries, it has already attained a visible position among the highest paid occupations. In Pakistan, it is gradually getting importance with increase in awareness which is creating a notable vacuum readily available to be filled by new aspirants.
No of Students	25
Learning Place	Classroom / Lab / Workshop / Industry

WEEKLY SCHEDULE OF TRAINING

Scheduled Week	Module Title	Learning Units	Remarks
Week – 01	Ethics In The Workplace	<ul style="list-style-type: none"> • Introduction to program, Its Importance & Ice Breaking Activities • Importance of Work Ethics • Necessary Work Ethics to be adopted in a professional working environment • The characteristics of person having a strong work ethic 	✓ Task - 01
	Introducing Managing Safely	<ul style="list-style-type: none"> • Motivational Lecture(<i>For further detail please see Page No: 4</i>) • Understanding what is meant by “health and safety” • The moral, legal and financial reasons to manage health and safety • Managers/Officer responsibilities and accountability 	
	Understanding Management System And Legal Framework For OH&S	<ul style="list-style-type: none"> • Health and safety law; civil, criminal and levels of legal duties • Enforcement of health and safety • Health and safety management systems; plan, do, check, act 	
Week – 02	Understanding Hazards	<ul style="list-style-type: none"> • Success story (<i>For further detail please see Page No: 5 and Annexure-III at the end</i>) • What is Hazard? • What are common hazards? • What can you do about hazards? • Case Study-1(<i>For further detail please see Page No: 6</i>) 	✓ Task – 2 ✓ Home Assignment

Week – 03	Risk Assessment Of Hazards At Workplace	<ul style="list-style-type: none"> • What is Risk? • What is Risk Assessment? • How is Risk Assessment carried out? <ul style="list-style-type: none"> • Job market • Job related skills. • Interpersonal skills • Communication skills 	✓ Task – 3 ✓ Home Assignment
Week – 04& 05	Controlling Risk	<ul style="list-style-type: none"> • Motivational Lecture(<i>For further detail please see Page No: 4</i>) • How do you reduce or remove risk? • Hierarchy of Risk Control • How do you decide which risk control to uses? 	✓ Task – 4 ✓ Home Assignment
	Personal Protective Equipment (PPE)	<ul style="list-style-type: none"> • What is Personal Protective Equipment and why do you need PPE? • What are different Types of PPE? • How to Select & Implement necessary PPE? 	
	1ST MONTHLY EXAMINATION (start of 5th week)		
	Understanding Safety Signs	<ul style="list-style-type: none"> • What is a safety sign? • When & Where to use safety signs? • What are different types of safety signs? • What are general rules for usage & maintenance of safety signs? • What are best practices for workplace floor marking? • Session on CV Building. • How to make notable CV. • Dos and Don'ts of CV making. 	✓ Task –5 ✓ Home Assignment
Week - 06	Fire Safety Management	<ul style="list-style-type: none"> • Success story (<i>For further detail please see Page No: 5 and Annexure-III at the end</i>) • Understanding Fire Chemistry • What are commonly used Fire Control Systems? • What are commonly used Fire Detection Systems? • How to develop a Fire Safety Management System in an Organization? 	✓ Task –6 ✓ Home Assignment

Weeks – 7 & 8	1 st Round of Industrial Projects	<ul style="list-style-type: none"> • Case Study-2(<i>For further detail please see Page No: 6</i>)Risk Assessment of Production/Manufacturing Processes and Recommendation of Reasonably Practicable Control Measures to improve the OHS&E at workplace • Individual PowerPoint Presentations • Session on Self-Employment • How to start a Business. • Requirements (Capital, Physical etc) • Benefits/Advantages of self-employment 	Schedule will be decided & Factories will be contacted in coordination with NAVTTC
Week - 09	Investigating Incidents	<ul style="list-style-type: none"> • Why investigate Incidents? • How do Incidents happen? • How do you carry out an Incident investigation? 	✓ Task –7 ✓ Home Assignment
	2ND MONTHLY EXAMINATION (start of week 9)		
	Dealing with Emergency and Basic First Aid	<ul style="list-style-type: none"> • Motivational Lecture(<i>For further detail please see Page No: 4</i>) • How to deal with an emergency situation? • What are basic First Aid techniques? 	✓ Task –8
Week – 10	Measuring Performance	<ul style="list-style-type: none"> • What’s performance measurement about? • How do you measure health & safety performance? • What is Auditing? • Success story (<i>For further detail please see Page No: 5 and Annexure-III at the end</i>) 	✓ Task –9 ✓ Home Assignment
	Protecting Our Environment	<ul style="list-style-type: none"> • Motivational Lecture(<i>For further detail please see Page No: 4</i>) <ul style="list-style-type: none"> • Session on General Overseas Employment opportunities. • Job search Avenues. • Visa Processes and other necessary requirements. • Immigration Information (Legal age requirements, Health Certificate, Police Clearance&Travel Insurance) • What is the impact of industry on the environment? 	✓ Task –10 ✓ Home Assignment

		<ul style="list-style-type: none"> • How can you control pollution & Waste? • What are the benefits of improved environmental performance? • What are main elements of Environmental Management System? • Case Study-3(<i>For further detail please see Page No: 6</i>) 	
	International Standard for OH&S and Environmental Management System	<ul style="list-style-type: none"> • What is ISO? • What is ISO 45001:2018 and what are its requirements? • What is ISO 14001:2015 and what are its requirements? • How to implement ISO standards for OH&S and Environmental management system in an organization? 	
Week – 11 & 12	2 nd Round of Industrial Projects	<ul style="list-style-type: none"> • Success story (<i>For further detail please see Page No: 5 and Annexure-III at the end</i>) • Risk Assessment of Production/Manufacturing Processes and Recommendation of Reasonably Practicable Control Measures to improve the OHS&E at workplace • Developing an in-house Environment Protection Strategy for concerned unit • Individual PowerPoint Presentations <ul style="list-style-type: none"> • Selection of two countries of destination (Gulf Countries, Malaysia, South Korea etc)focusing on <ol style="list-style-type: none"> I. Trade specific Job Prospects and Earning levels. II. Country Specific Labor laws, entry and exit requirements (Legal age requirements, Health Certificate, Police Clearance & Travel Insurance etc.). III. Case Study-4(<i>For further detail please see Page No: 6</i>) 	Schedule will be prepared & Factories will be selected in coordination with NAVTTC
Week - 13	<ul style="list-style-type: none"> • Review of the course & Drill-Test for 'IOSH-Managing Safely' examination • Final Examination on pattern of 'IOSH-Managing Safely international examination 		

TASKS FOR HEALTH, SAFETY AND ENVIRONMENT

Task No.	Task	Description
1	How a person's work ethic can be tested from situation to situation?	Students will be divided in to groups. Each group will be provided with a case-study to come up with best possible answer/solution based on knowledge gained during lecture.
	How to identify the best ethical options when faced with an important decision concerning work?	
2	Hazards Identification in the workplace	Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will; <ul style="list-style-type: none"> • Identify reasonably foreseeable hazards in the workplace • Present the findings and analysis using PowerPoint
3	Conducting Risk Assessment in the workplace	Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will; <ul style="list-style-type: none"> • Identify reasonably foreseeable hazards in the workplace • Conduct Risk Assessment of the identified Hazards • Present the findings and analysis using PowerPoint
4	Recommendation of Reasonably Practicable Control Measures AND necessary PPEs	Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will; <ul style="list-style-type: none"> • Identify reasonably foreseeable hazards in the workplace • Conduct Risk Assessment of the identified Hazards • Recommend reasonably practicable control measure • Recommend necessary PPEs • Present the findings and analysis using PowerPoint

5	Recommendation of necessary Safety Signs at Workplace	<p>Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will;</p> <ul style="list-style-type: none"> • Identify areas where Safety Signs are necessary • Recommend suitable Safety Signs at each identified location • Present the findings and analysis using PowerPoint
6	Recommendation of Fire Safety Management System at workplace	<p>Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will;</p> <ul style="list-style-type: none"> • Develop a fire safety management system for the assigned location based on attained knowledge • Present the findings and analysis using PowerPoint
7	Incident Investigation at Workplace [If any recent incident is reported]	<p>Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will;</p> <ul style="list-style-type: none"> • Investigate the recently reported incident (if any) • Present the findings and analysis using PowerPoint
8	Role-Play to demonstrate emergency response and basic first aid	<p>Students will be divided in to groups. Each group will be provided with a customized scenario to demonstrate;</p> <ul style="list-style-type: none"> • How to respond in an emergency situation? • How to provide basic first aid to the injured person?
9	Measuring Performance at Workplace	<p>Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will;</p> <ul style="list-style-type: none"> • Measure the OH&S condition of the location using standard formats
10	Recommendation of Environment Protection System at workplace	<p>Separate location will be assigned to each student within premises of PITAC/GCT-Peshawar or any other suitable location. Each student will;</p> <ul style="list-style-type: none"> • Develop an Environment Protection system for the assigned location based on attained knowledge

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.