

Government of Pakistan

National Vocational and Technical Training Commission

Prime Minister's Hunarmand Pakistan Program

"Skills for All"



Course Contents / Lesson Plan

Course Title: Die and Moulds Maker

Duration: 6 Months

Revised Edition

Trainer Name	
Course Title	Die and Moulds Maker
Objectives and Expectations	<p>Employable skills and hands-on practice for Die and Moulds Maker</p> <p>This course offers a broad, cross-disciplinary learning experience for students looking to pursue career in Die and Moulds making. The needs for superior Die and Moulds making technology have increased in keeping with the demands for a wide variety of performances such as high productivity, high quality, as well as labor and cost savings. This course will provide participants with an integrated approach to learn about the various aspects of Die and Moulds making and allied technologies.</p> <p><u>Main Expectations:</u></p> <p>In short, the course under reference should be delivered by professional instructors in such a robust hands-on manner that the trainees are comfortably able to employ their skills for earning money (through wage/self-employment) at its conclusion.</p> <p>This course thus clearly goes beyond the domain of the traditional training practices in vogue and underscores an expectation that a market-centric approach will be adopted as the main driving force while delivering it. The instructors should therefore be experienced enough to be able to identify the training needs for the possible market roles available out there. Moreover, they should also know the strengths and weaknesses of each trainee to prepare them for such market roles during/after the training.</p> <ol style="list-style-type: none"> 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 <u>Job Search & Entrepreneurial Skills</u> 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 comprehensible words. Moreover, it is helpful if it is assumed that the reader/listener knows nothing of what is being revealed. The optimum impact is created when the story is revealed in the form of:-

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

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

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

(iii) Case Studies

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

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

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

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

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

Case studies can be implemented in the following ways: -

- i. A good quality trade-specific documentary (At least 2-3 documentaries must be arranged by the training institute)

	<p>ii. Health & Safety case studies (2 cases regarding safety and 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>
Entry-level of trainees	Intermediate
Learning Outcomes of the course	<p>By the end of this course, students will be able to:</p> <ul style="list-style-type: none"> • Be able to recognize the dangers and observe relevant safety precautions while performing / supervising hot work. • Understand the differences and working principles of various Die and Moulds making equipment on board. • Methodologies for evaluating the product material • Detail aspect of mould making& testing • Basic fitting covering components • Different turning operations on lathe • Different milling operations • Solid modeling of mould in CAD & Pro-E • Working on EDM and wire EDM • Operation/program of both CNC turn centre & CNC machining centre • Construction of single or two cavity mould • Hydraulic & Pneumatic circuits • Workshop Calculation & Science and Engineering Drawing
Course Execution Plan	<p>The total duration of the 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: 520 hours</p>
Companies offering jobs in the respective trade	<ol style="list-style-type: none"> 1. Karachi Tools, Dies and Moulds Centre 2. Gujranwala Tools, Dies and Moulds Centre 3. Pakistan Industrial Technical Assistance Centre 4. Lucky Plastic Industries Pvt Ltd Lahore 5. Plastic Molding Company Karachi 6. Synthetic Products Enterprises Limited SPEL Lahore
Job Opportunities	<p>Can join industry as Technician and will progress further as Senior Technician, Supervisor and can rise to the level of Manager.</p> <p>Can become Entrepreneur in the related field.</p> <p>Can join Advanced Diploma (Vocational) courses as applicable.</p>
No of Students	25
Learning Place	Classroom / Lab

Instructional Resources	<ul style="list-style-type: none"> • AutoCAD by David Frey Prentice Hall INC • Technology of Machine Tools S.F Karar & A.F Check • Mechanical Engineering Series 5th Edition McGraw Hill • Die Makers Handbook Jerry Arnold • Die Design Fundamentals Vukota Boljanovic • Progressive Dies: Principles and Practices of Design and Construction Donald A. Peterson
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MODULES

Scheduled Weeks	Module Title	Learning Units	Remarks
Week 1	Introduction to Die and Moulds Making	<ul style="list-style-type: none"> • Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) • Job market • Course Applications • Institute/work ethics • Identify and describe personal protective equipment (PPE) related to the Die and Mould Making process. <ul style="list-style-type: none"> ▪ Identify and describe body, foot, and hand protective gear. ▪ Identify and describe ear, eye, face, and head protective gear. • Identify and describe Die and Mould making safety practices related to specific hazards or environments. 	<p>Home Assignment</p> <ul style="list-style-type: none"> • Task 1 • Task 2 • Task 3 <p><u>Details may be seen at Annexure-I</u></p>
Week 2	Basic fitting operation and dimensional accuracy	<ul style="list-style-type: none"> • Success stories (<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Bench work – Metal working hand tools and devices • Linear measurements- its units, steel rule dividers, callipers – types and uses, Punch – types and uses. • Vernier calliper – its parts, principles, reading, uses and care. • Outside micrometer – its parts, principles, reading, uses and care, vernier height gauge. • Marking tools – scribe, Dividers, Dot punch, Centre punch. • Dial test indicator-its parts, types, construction and uses. • Geometrical tolerance. British standard system, BIS system. • Study of tools used in chipping and scraping. 	<ul style="list-style-type: none"> • Task 4 <p><u>Details may be seen at Annexure-I</u></p>
Week 3	Fit of components for assembling as per required tolerance	<ul style="list-style-type: none"> • Motivational Lecture(<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Metals, difference between Metal and Non-Metal, properties of metal, Classification of metals and its applications, pig – iron, cast iron, 	<ul style="list-style-type: none"> • Task 5 <p><u>Details may be seen at Annexure-I</u></p>

		<p>wrought iron, steel-plain carbon steel (Low carbon steel, medium and high carbon steels, high speed steel, stainless steel, carbides, etc.)</p> <ul style="list-style-type: none"> Heat treatment of metals, process- such as annealing, nitriding, hardening, tempering, case hardening, carburizing, cyaniding, flame hardening, Induction hardening, purposes and its effects on the properties of steel. 	
Week 4	Conventional lathe machine operation	<ul style="list-style-type: none"> Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to learn:</p> <ul style="list-style-type: none"> Getting to know the lathe with its main components, lever positions and various lubrication points as well. Introduction to lathe- its types. Centre lathe construction, detail function of parts, specification. Safety points to be observed while working on a lathe. 	<ul style="list-style-type: none"> Task 6 <p><u>Details may be seen at Annexure-I</u></p> <ul style="list-style-type: none"> Monthly Test 1
Week 5	Perform different Turning Operation	<ul style="list-style-type: none"> Motivational Lecture(For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> Different types of Lathe operations - facing, turning, parting-off, grooving, chamfering, boring etc. Lathe cutting tool-different types, shapes and different angles (clearance, rake etc.), specification of lathe tools. Driving mechanism, speed and feed mechanism of Lathe. Slotter – Classification, principle, construction, Safety precaution. Comparative study with a shaping machine. Introduction and their indexing process on a Slotter by its Rotary table graduations. Driving mechanisms, quick return motion and speed ratio. Safety points to be observed while working on a Slotter. Chucks & different types of job holding devices on lathe and advantages of each type. Knurling-types, grade & its necessity. Vernier Bevel Protractor – parts, reading and uses. 	<ul style="list-style-type: none"> Task 7 <p><u>Details may be seen at Annexure-I</u></p>

Week 6	Produce threaded components	<ul style="list-style-type: none"> • Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Calculations of taper turning by off-setting tail stock. • Sine Bar – description & uses • Slip gauge –description and uses. 	<ul style="list-style-type: none"> • Task 8 <p><u>Details may be seen at Annexure-I</u></p>
Week 7	Milling Operation and indexing	<ul style="list-style-type: none"> • Motivational Lecture(For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Milling Machine: importance, types, construction and specification. • Driving and feed mechanism of Milling Machine • Nomenclature of milling cutters, different milling cutter angles, Milling cutter materials. • Job holding devices-vice, clamps, V-block, parallel block etc. • Slotting tools-types, tool angles. Comparison of tool angle. • Milling cutter holding devices, work holding devices, milling process – Up milling and Down milling. • Calculation of cutting speed, feed, machining time for milling machine. • Milling machine attachments – vertical milling attachment, universal milling attachment, circular milling attachment, dividing head attachment, etc. • Use of tool with holder for internal operations. Precautions to be observed during slotting internal operations. • Use of circular marks on the table for slotting curves. • Chain, Sprocket and their applications. • Spline – types and uses. • Introduction to coolant & lubricant-difference between them, types and uses of each. • Dividing head – Introduction, construction, types. Simple and universal dividing head. • Indexing methods – direct indexing, simple indexing, angular indexing, differential indexing 	<ul style="list-style-type: none"> • Task 9 <p><u>Details may be seen at Annexure-I</u></p>
Week 8	Surface Grinding Operation	<ul style="list-style-type: none"> • Success stories (For further detail please see Page No: 3& 4) 	<ul style="list-style-type: none"> • Task 10 <p><u>Details may</u></p>

		<p>Students are introduced to:</p> <ul style="list-style-type: none"> Grinding machine introduction, types, Surface & Cylindrical grinding Machine- their parts, functions, specification, and uses. Safety points to be observed while working on a Grinding machine. Grinding wheel shapes and sizes. Standard marking system. Selection of grinding wheel. Specification and Identification of grinding wheels. 	<u>be seen at Annexure-I</u>
Week 9	Cylindrical Grinding Operations	<ul style="list-style-type: none"> Motivational Lecture(For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> Procedure for mounting of grinding wheels, balancing of grinding wheels. Dressing, types of dresser. Glazing and Loading of wheels – its Causes and remedies. Roughness values and their symbols. Explain the importance and necessity of quality. Selection procedure of grinding wheels. Abrasives - its types, Bond, Grade, Grit, structure. Standard marking system of Grinding Wheel. 	<p>• Task 11</p> <p><u>Details may be seen at Annexure-I</u></p>
Week 10	Develop isometric drawing and solid modeling of mould using CAD & Pro-E.	<ul style="list-style-type: none"> Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> AutoCAD: Introduction to AutoCAD, creating first drawing, learning the tools trade, organizing the work, drawing the first mould. Pro-E: Familiarization of interface/ Windows, Sketching, basic modeling, advanced modeling, assembling, drawing, surface modeling, manufacturing – mould design awareness. 	<p>• Task 12</p> <p><u>Details may be seen at Annexure-I</u></p>
Week 11	Electric Discharge machine (EDM) and Wire EDM	<ul style="list-style-type: none"> Motivational Lecture (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> Electrical discharge machine (EDM) introduction principle of operation, advantages and disadvantages and its 	<p>• Task 13</p> <p><u>Details may be seen at Annexure-I</u></p>

		<p>applications.</p> <ul style="list-style-type: none"> • Introduction principle of operation advantages and disadvantages 	
Week 12	CNC lathe and preparing part program	<ul style="list-style-type: none"> • Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Safety Precautions: Safe handling of tools, equipment & CNC machines, CNC turning with FANUC CNC CONTROL- (Fanuc-Oi-T latest) CNC Machine and Control specifications. CNC system organization Fanuc-Oi-T. Co-ordinate systems and Points. CNC lathe, Types, Machine axes. 	<p>• Task 14</p> <p><u>Details may be seen at Annexure-I</u></p>
Week 13	CNC machining centre and preparing part program	<ul style="list-style-type: none"> • Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Safety Precautions: Safe handling of tools, equipment & CNC machines, CNC Mill with FANUC CNC CONTROL- (Fanuc-Oi-M latest) CNC Machine & Control specifications. CNC system organization Fanuc-Oi-M. Co-ordinate systems and Points. CNC Machines Milling, Types, Machine axes. 	<p>• Task 15</p>
Week 14	Hand Injection Mould and mould assembly	<ul style="list-style-type: none"> • Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Introduction to plastic material: Types of plastics, differentiation of plastics, Properties, application, fillers and additives and reinforced plastics. • Mould terminology: Core, cavity, impression, runner, gate, sprue bush, mould base etc. • Parting line: Types of parting line, mould matching (Bedding down), vent and relief. • Requirement for ejection: Types of ejector grids, ejector elements and ejector system. • Feed System: Sprue, runner, gate, types, design and calculations, vent design, balancing, etc. 	<p>• Home Assignment</p> <p>• Task 16</p> <p><u>Details may be seen at Annexure-I</u></p>
Week 15	Basic electrical circuit and	<ul style="list-style-type: none"> • Motivational Lecture (For further detail 	<p>• Task 17</p>

	sensors	<p><i>please see Page No: 3& 4)</i></p> <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Study of basic Electricals- Voltage – Current etc. • Working of Solenoids, Inductors, Motors, Generator Based on Electromagnetic Induction Principle • Switches, Fuse and Circuit Breakers • Introduction to Sensors--Fundamental of Sensor • Proximity Sensors Classification and Operation-Proximity Sensor-Types of Proximity Sensor and Their Working-Industrial Application Sensors for Distance and Displacement -LVDT- Linear Potentiometer -Ultrasonic and Optical Sensors-Industrial Application. 	<p><u><i>Details may be seen at Annexure-I</i></u></p>
Week 16	Two cavity injection mould and try out component	<ul style="list-style-type: none"> • Success stories (For further detail please see Page No: 3& 4) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Shrinkage: Introduction mould life, cavity/core dimensions, and various shrinkage values for different plastic materials. • Temperature controlling of moulds: Introduction, factors effecting the cooling of moulds, layout and sizing of cooling channel, cooling integer type mould plate (core cavity, Bolster), cooling core and cavity inserts and sub inserts, mould cooling requirements and calculations. • Injection moulding machines: Introduction, clamping system/ injection system terminologies and specifications, screw terminology construction of screw, types of moulding machines, and sequence in the moulding cycle. • Selection of mould base, material and no. of cavities: Introduction, Selection of mould base and material, advantages and disadvantages of single/ multi-cavity mould, calculation of no. of cavities. • Splits: External undercut components, methods of operation, split locking methods, splits safety arrangements. • Side cores and side cavities: Introduction, moulding embedded side holes/ recess/slots, Design 	<ul style="list-style-type: none"> • Task 18 <p><u><i>Details may be seen at Annexure-I</i></u></p>

		<p>requirements for side core/ side cavities, internal side core/side cavities.</p> <ul style="list-style-type: none"> • Moulding internal under cuts/ threads: Definition, form pin/ split core/ side core, stripping internal under cuts purpose of threads in plastics, moulding internal threads, power and transmission system layout of impression, and moulding of external threads. 	
Week 17	Single cavity mould (Compression mould/ plunger type transformer mould)	<ul style="list-style-type: none"> • Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Moulding of thermoset materials: Introduction, processing method, compression moulding, definition, pellet, compression moulding types, advantages and disadvantages of semi positive and fully positive mould, automatic compression mould, mould heaters and thermo couples, etc. • Transfer moulding, types of transfer moulding, advantages and disadvantages of transfer moulding, Injection moulding of thermo set material, Advantages and disadvantages of injection moulding of thermo set material, Compression/ transfer moulding defects. • Surface finish: Mould polishing, different types and appearance required after finishing, overview of the process, standard specification of finish, mechanical equipment of mould polishing, finishing process, problems in mould polishing and solutions, surface treatment method. • Multi day light mould: Introduction, under feet mould with reverse tapered sprue, floating runner plate, working system for floating cavity plate, other standard designs, some non-standard latch/ locks, some sample multi-day light design. • Introduction of blow moulding, types of blow moulding advantage and disadvantage of blow moulding. Material used in blow moulding, blow moulding fault & remedy. 	<ul style="list-style-type: none"> • Task 19 <p><u>Details may be seen at Annexure-I</u></p>

Week 18	Circuit of pneumatics and hydraulics	<ul style="list-style-type: none"> • Success stories (<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Basic principles of hydraulics/ pneumatics system, advantages and disadvantages of hydraulics and pneumatics systems, theory of Pascal's law, Brahma's press, Pressure and flow, types of valves used in hydraulics and pneumatics system. 	<ul style="list-style-type: none"> • Task 20 <i><u>Details may be seen at Annexure-I</u></i> • Monthly Test
Week 19	Overhauling of machines and check for functionality	<ul style="list-style-type: none"> • Motivational Lecture (<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Lubricating system-types and importance • Maintenance: Definition, types and its necessity. • System of symbol and colour coding. • Possible causes for failure and remedies. 	<ul style="list-style-type: none"> • Task 21 <i><u>Details may be seen at Annexure-I</u></i>
Week 20	Develop isometric drawing of mould	<ul style="list-style-type: none"> • Success stories (<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • Hot runner mould: Definition, runner less mould, advantages and disadvantages of hot runner moulding system, valve system, selecting a hot runner system, advantages and disadvantages of insulated runner mould, starting/ restarting nozzles in a manifold application. • Injection moulding defects: Introduction, common faults, possible problems and remedies, analysis of moulding problems and solutions. • Other moulding processes: Blow moulding, Extrusion moulding, rotational moulding, thermo forming, sheet and film forming. • Maintenance of mould: Introduction, upkeep and maintenance, types of maintenance of idle moulds, maintenance control, and frequency of maintenance. • Die cast mould: Introduction to Die casting, gating system design, force calculation, defects/remedies. 	<ul style="list-style-type: none"> • Task 22 <i><u>Details may be seen at Annexure-I</u></i>

Week 21	Employable Project/ Assignment (6 weeks) i.e. 21-26 besides regular classes. OR On the job training (2 weeks)	<ul style="list-style-type: none"> • Guidelines to the Trainees for selection of students employable project like final year project (FYP) • Assign Independent project to each Trainee • A project-based on trainee's aptitude and acquired skills. • Designed by keeping in view the emerging trends in the local market as well as across the globe. • The project idea may be based on Entrepreneur. • Leading to successful employment. • The duration of the project will be 6 weeks • Final viva/assessment will be conducted on project assignments. • At the end of the session, the project will be presented in a skills competition • The skill competition will be conducted on zonal, regional, and National levels. • The project will be presented in front of Industrialists for commercialization • The best business idea will be placed in the NAVTTC business incubation center for commercialization. <p style="text-align: center;">OR</p> <p>On the job training for 2 weeks:</p> <ul style="list-style-type: none"> • Aims to provide 2 weeks of industrial training to the Trainees as part of the overall training program • Ideal for the manufacturing trades • As an alternative to the projects that involve expensive equipment • Focuses on increasing Trainee's motivation, productivity, efficiency, and quick learning approach. 	Monthly Test
Week 22	Capstone Project	<p>Students are provided with details regarding a capstone project that they are required to complete to showcase their learning. The project should ideally consist of the following deliverables:</p> <ol style="list-style-type: none"> 1. Design brief/description outlining their project 2. Research collected during the project 3. Rough sketches, either hand-drawn or digitally created that showcase their design process 4. Professionally presented a main body of artwork at the end of the course 	

		<p>Notes for the Trainer/Teacher:</p> <ul style="list-style-type: none"> Each student must receive a separate/independent project based on their strengths and interests. This will reinforce their motivation and determine their aptitude towards specific design fields. Each project should be designed keeping future design trends as well as current market demands in mind The duration for the completion of the project is 4 weeks <p>It's important to reiterate the value of these projects as each student will later be able to showcase their creative effort in the real world market, giving them leverage over others for better employment.</p> <p>Ideas for projects may be generated via different sites such as: https://1000projects.org/ https://www.freestudentprojects.com/</p>	
Week 23	Introduction to Freelancing	<ul style="list-style-type: none"> Motivational Lecture(<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> the concept of freelancing how to become freelance and create a sustainable income pros and cons of freelancing the ethical and professional way of becoming a productive freelancer resources available for freelancing in the field of design how to join freelancing sites the process of creating a freelancing profile 	
Week 24	Professional practice methods& legal side of design	<ul style="list-style-type: none"> Success stories (<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> the standards that define the expectations of a professional welder the principles of integrity that demonstrate respect for the profession, for colleagues, for clients, for audiences or consumers, and society as a whole the perspectives of the profession i.e. understanding the profession, the 	

		<p>meanings of environmental responsibility, copyright, and ethics</p> <ul style="list-style-type: none"> • what legalities are involved in professional projects • how to build strong professional proposals • copyrights, copyright infringement, plagiarism, crediting creators, purchasing online products, downloading 'free' content • the do's and don'ts of how to price their time, effort, and creativity 	
Week 25	Preparing your portfolio	<ul style="list-style-type: none"> • Motivational Lecture(<i>For further detail please see Page No: 3& 4</i>) <p>Students are introduced to:</p> <ul style="list-style-type: none"> • the concept of design portfolios • the concept of present design work/projects in a professional manner • websites that provide free portfolio hosting such as Behance and Dribble • creating a portfolio • how to select work for presenting in your portfolio 	Final Assessment
Week 26	Entrepreneurship and Final Assessment in project	<ul style="list-style-type: none"> • Success stories (<i>For further detail please see Page No: 3& 4</i>) • 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 • Stakeholders Power Grid • RACI Model, SWOT Analysis, PEST Analysis • SMART Objectives • OKRs • Cost Management (OPEX, CAPEX, ROCE, etc.) • Final Assessment 	

Tasks For Certificate in Die and Moulds Maker

Task No.	Task	Description	Week
1.	Find the career path	<ul style="list-style-type: none"> Prepare a career path related to your course and also highlight the emerging trends in the local as well as international market 	Week 1
2.	Work Ethics	<ul style="list-style-type: none"> Generate a report on Institute work ethics and professionalism related to your course 	
3.	Identify hazards in workshop	<ul style="list-style-type: none"> Prepare a report of at least 10 safety practices and Die & Moulds making related hazards 	
4.	Plan and organize the work to make job as per specification applying different types of basic fitting operation and check for dimensional accuracy following safety precautions. <i>[Basic fitting operation – Filing, Marking, Hack sawing, Drilling, Taping, chipping and Grinding etc. Accuracy: $\pm 0.1\text{mm}$].</i>	<ul style="list-style-type: none"> Identification of tools & equipments as per desired specifications for filing and marking, visual inspection of raw material for rusting, scaling, corrosion etc. Filing- File top of the “U” channel, check and measure with steel rule. Measuring practice with steel rule, outside & inside callipers. Dot punching and letter and number punching. Drill Plate filing to an accuracy of $\pm 0.05\text{mm}$. Marking for centre punching, drilling, reaming, tapping, counter boring, counter sinking. Die pass on standard material (M8). Chipping flat surfaces along a marked line on pre-machined piece. Slot, straight and angular chipping. Cutting tool filing and grinding on standard material. 	Week-2
5.	Make different fit of components for assembling as per required tolerance observing principle of interchangeability and check for functionality. <i>[Different Fit –Open, Angular, & Square Fit; Required tolerance: $\pm 0.05\text{ mm}$, angular tolerance: 1 degree.]</i>	<ul style="list-style-type: none"> Make Male & Female ‘Open’ fitting with accuracy $\pm 0.05\text{ mm}$. Make male & female for square fit with accuracy $\pm 0.05\text{ mm}$. Scrapping exercise on 3 pieces using two female pieces of square fit. Angular fitting with male & female. Assembly fit with male & female by dowelling and screwing. 	Week 3
6.	Set different shaped jobs on different chuck and demonstrate conventional lathe	<ul style="list-style-type: none"> Identify & function of different parts of lathe. Practice on operation of lathe (dry/idle run). 	

	<p>machine operation observing standard operation practice. <i>[Different chucks:3 jaws & 4 jaws, different shaped jobs: round, square, hexagonal]</i></p>	<ul style="list-style-type: none"> • Setting lathe on different speed and feed. • Cone turning using hand tools-radius external and internal. 	Week 4
7.	<p>Prepare different cutting tool to produce jobs to appropriate accuracy by performing different turning operations.<i>[Different cutting tool – V tool, side cutting, parting, thread cutting (both LH & RH), Appropriate accuracy: $\pm 0.06\text{mm}$, Different turning operation – Plain, facing, drilling, boring (counter & stepped), grooving, Parallel Turning, Step Turning, parting, chamfering, U-cut, Reaming, internal recess, knurling.]</i></p>	<ul style="list-style-type: none"> • Grinding of R.H. and L.H. tools, parting tool, Round nose tool. • Checking of angles with angle gauge / bevel protractor. • Grinding of “V” tools for threading of Metric/ British threads. • Plain turning (holding in 4 – jaw chuck), step turning and forming shoulder, chamfering in between centres as per dimensions. • Pillar turning between centres • Bush turning, drilling and boring/reaming. • Spur gear blank turning, drilling and boring. • Turning and die passing in a standard material. • Pin punch turning and knurling • Using 4 – jaw chuck; face both side of a plate thickness as per drawing. • Eccentric turning male and female work pieces and assembly. 	Week 5
8.	<p>Set the different machining parameters to produce threaded components applying method/ technique and test for proper assembly of the components with an accuracy of $\pm 0.05\text{ mm}$. <i>[Different threads viz., metric/ BSW/ Square]</i></p>	<ul style="list-style-type: none"> • External thread cutting on step turned work piece. (Metric, BSW & Square Thread) • Turn job for Internal thread and cut internal thread 	Week 6

9.	Set the different machining parameters and cutters to prepare job by performing different milling operation and indexing. <i>[Different machining parameters – feed, speed and depth of cut. Different milling operations – plain, stepped, angular, dovetail, T-slot, contour, gear milling]</i>	<ul style="list-style-type: none"> • Demonstrate working principle of Milling Machine. • Set vice & job on the table of Milling Machine. • Set arbor on the spindle of milling machine. • Set the cutter on arbor. • Safety points to be observed while working on a milling machine. • Demonstrate Up Milling and Down Milling Process. • Perform Step milling using side and face cutter checking with depth micrometer. • Slot milling with side and face cutter and Slot cutting by slitting saw. • Tee slot milling • Spur gear milling • Keyway slotting 	Week 7
10.	Produce components of high accuracy by surface grinding operation. <i>[Accuracy of +/- 0.02 mm]</i>	<ul style="list-style-type: none"> • Wheel balancing & truing. • Dressing of grinding wheel. • Grinding of block (six sides) in surface grinding machine with an accuracy of ± 0.01 mm. • Grinding of slot block in surface grinding machine with an accuracy of ± 0.01 mm. • Set and perform angular grinding using sign plate to stranded angle. • Make slide fit (male/female) 	Week 8
11.	Produce components of high accuracy by cylindrical grinding operations. <i>[Accuracy of +/- 0.02mm.]</i>	<ul style="list-style-type: none"> • External Parallel grinding (Both holding in chuck/collet and in between centres). • Internal Parallel grinding (Both holding in chuck/collet and in between centres). • Grinding of step in Cylindrical grinding machine with an accuracy of ± 0.01 mm • Grinding of external taper in Cylindrical grinding machine with an accuracy of ± 0.01 mm. 	Week 9
12.	Develop isometric drawing and solid modelling of mould using CAD & Pro-E	<ul style="list-style-type: none"> • Prepare simple mould design drawings with basics of AutoCAD viz., Basic and advanced 2D drafting, draw commands, Constraints, Modify commands, Layers, Line types block, Texts, Attribute, Table, Dimensioning, Isometric, Solid modelling, View port. • Prepare solid modelling of simple mould with Pro-E [Sketch, Part (solid, surface, free style, flexible modelling, sheet metal.), Assembly, Creo direct, Creo simulate]. • Creating (NC assembly and mould cavity) drawing. 	Week 10
13.	Produce component of high accuracy by different operations using Electric Discharge machine (EDM) & Wire EDM accuracy ± 0.02 mm	<ul style="list-style-type: none"> • EDM machining practice/ observation on EDM machine exercises. • Machining practice on Wire EDM machine. 	Week 11

14.	Set (both job and tool) CNC lathe and produce components as per drawing by preparing part program	<ul style="list-style-type: none"> Machine starting & operating in Reference Point, JOG, and Incremental Modes. Co-ordinate system points, assignments and simulations Absolute and incremental programming assignments and simulations. Co-ordinate points, assignments and simulations. Identification of machine over travel limits and emergency stops. Work and tool setting. Automatic Mode operation: facing, profile turning, drilling, tapping, reaming, thread cutting etc. 	Week 12
15.	Set (both job and tool) CNC machining centre and produce components as per drawing by preparing part program	<ul style="list-style-type: none"> Machine starting & operating in Reference Point, JOG, and Incremental Modes. Co-ordinate system points, assignments and simulations Absolute and incremental programming assignments and simulations. Polar co-ordinate points, assignments and simulations. Identification of machine over travel limits and emergency stops. Work and tool setting. Automatic Mode operation: Face Milling, profile milling, drilling, tapping, reaming etc. 	Week 13
16.	Construct a Hand Injection Mould and try out/ test the mould assembly	<ul style="list-style-type: none"> Manufacture hand injection mould. (May use the plates used in turning, milling and grinding exercise). Try out and rectification. 	Week 14
17.	Demonstrate function of basic electrical circuit and sensors.	<ul style="list-style-type: none"> Measure Current, Voltage and Resistance using simple Ohm's Law Circuit and familiarizing multi-meter. Soldering Techniques. Step up and step-down transformers. Working with Solenoids and Relays. Working of Motor & generators. Behavior of Proximity Sensors. Behavior of ultrasonic sensors. Logical operation of sensors. Limit & Level Control using Sensors. Interfacing of Sensors with Electrical Actuators. 	Week 15
18.	Construct of two cavity injection mould and try out component.	<ul style="list-style-type: none"> Develop isometric drawing and manufacture 2 cavity injection moulds in a group of 5 trainees using various tool room machines (conventional and non-conventional machines). 	Week 16
19.	Construct single cavity mould (Compression mould/ plunger type transformer mould).	<p>Guidelines for the final project</p> <ul style="list-style-type: none"> Manufacture single cavity plunger type transfer mould in a group of 5 trainees using various tools room machine (conventional and non-conventional) <p>OR</p> <ul style="list-style-type: none"> Manufacture single cavity compression mould 	Week 17

		construct a single cavity compression mould in a group of 5 trainees using various tool room machine (conventional and non-conventional)	
20.	Construct circuit of pneumatics and hydraulics observing standard operating procedure & safety aspect.	<ul style="list-style-type: none"> • Identification and familiarization of various types of hydraulic & pneumatic elements such as cylinder, valves, actuators and filters. • Study of simple hydraulic & pneumatic circuit. 	Week 18
21.	Plan and perform simple repair, overhauling of different machines and check for functionality. <i>[Different Machines – Drill Machine, milling machine and Lathe]</i>	<ul style="list-style-type: none"> • Perform Periodic Lubrication system on Machines. • Perform simple repair work. • Perform the routine maintenance with check list. • Inspection of Machine tools such as alignment, leveling etc. • Accuracy testing of machine tools such as geometrical parameters. 	Week 19
22.	Develop isometric drawing and construct two cavity moulds with side core. OR Construct an injection mould with side cavities (with cam pin) (two cavities rounded square bobbin)	<ul style="list-style-type: none"> • Develop isometric drawing and manufacture 2 cavity injection moulds with side cavities in a group of 5 trainees using various tool room machines (conventional and non-conventional) • Assemble all the parts of mould and try-out and find out fault of component and rectification. 	Week 20
23.	Build your CV	<p>Download professional CV template from any good site (https://www.coolfreecv.com or relevant)</p> <ul style="list-style-type: none"> • Add Personal Information • Add Educational details • Add Experience/Portfolio • Add contact details/profile links 	Week 21-26
24.	Create an account profile on Fiverr (at least two gigs) and Up-work	<p>Create an account by following these steps:</p> <p>Step 1: Personal Info Step 2: Professional Info Step 3: Linked Accounts Step 4: Account Security</p>	Week 21-26
25.	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 	Week 21-26

		<ul style="list-style-type: none"> • 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 ▪ All jobs ▪ Agency ▪ Industry 	
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Die and Moulds Maker

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>

Success Story of a 23 Year - Old SEO Expert | How This Business Works | Urdu Hindi Punjabi

<https://www.youtube.com/watch?v=tlQ0CWgszl0>

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

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

Tool & Die/Machinist Jobs

<https://www.youtube.com/watch?v=GoP73HiCUvc>

Job Talks - Tool and Die Maker - Randy Discusses Misconceptions of the Job

<https://www.youtube.com/watch?v=Dod9igHR2rM>

Annexure-II

SUGGESTIVE FORMAT AND SEQUENCE ORDER OF MOTIVATIONAL LECTURE.

Mentor

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

Session- 1 (Communication):

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

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

Activity:	Participant Time	Teacher Time	Mentor Time
Intro Attend and contribute to the scheduled.			
Understand good communication skills and how it works.			
Understand what good communication skills mean			
Understand what skills are important for good communication skills			
Key learning outcomes:	Resources:		Enterprise skills developed:
• Understand the	• Podium		• Communication

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

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

MOTIVATIONAL LECTURES LINKS.

<u>TOPIC</u>	<u>SPEAKER</u>	<u>LINK</u>
How to Face Problems In Life	Qasim Ali Shah	https://www.youtube.com/watch?v=OrQte08MI90
Just Control Your Emotions	Qasim Ali Shah	https://www.youtube.com/watch?v=JzFs_yJt-w
How to Communicate Effectively	Qasim Ali Shah	https://www.youtube.com/watch?v=PhHAQEGehKc
Your ATTITUDE is Everything	Tony Robbins Les Brown David Goggins Jocko Willink Wayne Dyer Eckart Tolle	https://www.youtube.com/watch?v=5fS3rj6eIFg
Control Your EMOTIONS	Jim Rohn Les Brown TD Jakes Tony Robbins	https://www.youtube.com/watch?v=chn86sH0O5U
Defeat Fear, Build Confidence	Shaykh Atif Ahmed	https://www.youtube.com/watch?v=s10dzfbzdz4
Wisdom of the Eagle	Learn Kurooji	https://www.youtube.com/watch?v=bEU7V5rJTtw
The Power of ATTITUDE	Titan Man	https://www.youtube.com/watch?v=r8LJ5X2ejqU
STOP WASTING TIME	Arnold Schwarzenegger	https://www.youtube.com/watch?v=kzSBrJmXqdg
Risk of Success	Denzel Washington	https://www.youtube.com/watch?v=tbnzAVRZ9Xc

SUCCESS STORY

S. No	Key Information	Detail/Description
1.	Self & Family background	<p>Danyal Saleem, who lives in Mirpur (AJK), is an example of how hard work and perseverance can reap rich rewards when bidding for projects online. The graphic designer works exclusively on an online freelancing platform and has earned, on average, US\$20,000 per month for the past several months. But this isn't a story of overnight success – Danyal has had to work hard to differentiate himself and stay true to his goal.</p> <p>It was a full year later, in May 2017, when Danyal finally decided to jump in. He signed up for one of the numerous sites that connect designers or coders with people or companies that have small projects, like designing a logo or building a website. He had already started a small business to help pay for his college education, so he was nervous and apprehensive about the decision. “I gave myself two or three months at most. If I didn't succeed, then I would go back to running the business as it was showing potential,” he says.</p> <p>If at first, you don't succeed, try try again</p>
2.	How he came on board NAVTTC Training/ or got trained through any other source	Certification in graphic designing from STEPS(NAVTTC partner institute)
3.	Post-training activities	<p>Danyal's area of expertise is in graphic design. In his first month using Fiverr, he pitched mostly for projects centered around logo designing. But it wasn't so simple. In the first few weeks, he didn't hear back from even a single client, despite pitching for dozens of projects.</p> <p>“I needed to understand what worked, so I read blogs, participated in forums, and analyzed profiles of successful freelancers. It was an uphill struggle, but I didn't want to give up,” he explains.</p> <p>Danyal says he understands why clients would be apprehensive giving projects to untested freelancers. They have hundreds of options to choose from, he</p>

		<p>explains, and to give a project to someone with no experience requires a strong leap of faith.</p> <p>A slow stream of projects started to come Danyal's way. Within a few months, he was landing an average of a hundred projects every month, with a large number of repeat clients. He also expanded the range of his professional services, branching out from logo design to business cards, banners, Facebook cover pages, letterheads, and stationery.</p> <p>But he's had to face his fair share of challenges too. The shoddy state of internet infrastructure in his city, Mirpur, threatened to derail his freelancing career. "Sometimes I haven't had connectivity for two days straight," he explains. "That's unthinkable for someone who makes his livelihood on the internet."</p>
4.	Message to others (under training)	<p>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.</p>

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

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

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

Workplace/Institute Ethics Guide

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.