

**Government of Pakistan**  
**National Vocational and Technical Training Commission**

**Prime Minister's Hunarmand Pakistan Program**

"Skills for All"



**Course Contents/ Lesson Plan**

**Course Title: Mobile Phone Repairing**

**Duration: 3 Months**

## Course Details / Description & Preliminaries

<b>Course Title</b>	<b>Mobile Phone Repairing</b>
<b>Objectives and Expectations</b>	<p data-bbox="495 323 1505 420"><u><b>Employable skills through an intensive course on Mobile Phone Repairing</b></u></p> <p data-bbox="495 472 1505 909">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="495 934 1505 1260">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="495 1323 787 1360"><b>Main Expectations:</b></p> <p data-bbox="495 1381 1505 1591">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="495 1612 1505 1940">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</p>

**Key Features of Training & Special Modules**

weaknesses of each individual 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. 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 (5<sup>th</sup> & 6<sup>th</sup> month) through which, the trainees will be made aware of the Job search techniques in the local as well as international job markets (Gulf countries). Awareness around the visa process and immigration laws of the most favored labor destination countries also 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

## **Training Tools/ Methodology**

documentaries. Needless to say that if the training provider puts his heart and soul into these otherwise non-technical components, the image of Pakistani workforce would undergo a positive transformation in the local as well as international job markets.

In order 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 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 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.

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

	<p>documentaries must be arranged by the training institute)</p> <p>ii. Health &amp; Safety case studies( 2 cases regarding safety and domestic accidents must be arranged by the training institute)</p> <p>iii. Field visits( At least one visit to a trade specific major industry/ site must be arranged by the training institute)</p>
<b>Learning Outcome of the Course</b>	<p>By the end of the course the trainees will be able to have following competencies and skills.</p> <ul style="list-style-type: none"> <li>• Work according to general workshop safety rules.</li> <li>• Use the measuring instruments safely.</li> <li>• Operate the series &amp; parallel circuit, capacitors, inductors etc.</li> <li>• Use the Transformers &amp; batteries</li> <li>• Operate the different electronic devices like semiconductor devices, diode &amp; their applications &amp; bipolar transistor etc.</li> <li>• Use the different communication systems like radio transmitter, radio receiver &amp; wireless communication etc.</li> <li>• Operate the computers properly.</li> <li>• Operate the different instruments like microscope hot air gun &amp; soldering station etc.</li> <li>• Handle the network traffic signaling and Tele services.</li> <li>• Find the faults in mobiles &amp; to repair them.</li> <li>• Read the block diagrams of mobile sets.</li> <li>• Troubleshoot of different mobile sets.</li> <li>• Troubleshoot of software problems.</li> <li>• Repair the IMEI.</li> <li>• Unlock the sp lock</li> <li>• Upgrade software version of handset.</li> </ul>
<b>Course Execution Plan</b>	<p>Total duration of course: <b>3 months (12 Weeks)</b></p> <p>Class hours: <b>4 hours per day</b></p> <p>Theory: <b>20%</b></p> <p>Practical: <b>80%</b></p> <p>Weekly hours: <b>20 hours per week</b></p> <p>Total contact hours: <b>240 hours</b></p>
<b>Companies Offering Jobs in the respective trade</b>	<p>Public/Private industries including:</p> <ol style="list-style-type: none"> <li>1. <b>Samsung</b></li> <li>2. <b>Nokia</b></li> </ol>

	<ol style="list-style-type: none"> <li>3. Oppo</li> <li>4. Motorola</li> <li>5. <b>Lenovo</b></li> <li>6. <b>Huawei</b></li> <li>7. <b>Vivo</b></li> <li>8. <b>LG</b></li> </ol>
<b>Job Opportunities</b>	<ul style="list-style-type: none"> <li>• In Mobile Phone Service Center</li> <li>• As Lab technician in Institutes</li> <li>• As Mobile phone repair technician</li> <li>• Self-Employment</li> </ul>
<b>No of Students</b>	25
<b>Learning Place</b>	Classroom / Lab / Workshop
<b>Instructional Resources</b>	



## WEEKLY SCHEDULE OF TRAINING

Scheduled Week	Module Title	Learning Units	Remarks
Week 1	Fundamentals of Mobile Telephony	<p><b>Motivational Lecture</b> (For further detail please see Page No: 3&amp; 4)</p> <p><b><u>Introduction to Wireless Communication System</u></b></p> <ul style="list-style-type: none"> <li>• Abbreviations of Communication Systems</li> <li>• Mobile Radio system Around the world</li> <li>• Examples of wireless Communication System</li> <li>• Paging</li> <li>• Cordless Telephone system</li> <li>• Cellular Telephone System</li> <li>• Comparison of Common Wireless Communication Systems</li> </ul> <p><b><u>Multiplexing</u></b></p> <ul style="list-style-type: none"> <li>• Multiplexing Techniques Overview</li> <li>• Introduction to Multiplexing Technique</li> <li>• Frequency Division Multiplexing (FDM)</li> <li>• Time Division Multiplexing (TDM)</li> </ul> <p><b><u>Multiple Access</u></b></p> <ul style="list-style-type: none"> <li>• Introduction to Multiple Access</li> <li>• Frequency Division Multiple Access (FDMA)</li> <li>• Time Division Multiple Access (TDMA)</li> <li>• Code Division Multiple Access (CDMA)</li> <li>• Advance Mobile Phones Service (AMPS) and European Total Access Communication System (ETACS) Overview</li> </ul>	<p><b>Task-1</b> <b>Task-2</b> <b>Task-3</b> <b>Task-4</b> <b>Task-5</b></p> <p>(Details may be seen at Annexure-I)</p>
Week 2	Fundamentals of Mobile Telephony	<p><b>Success stories</b> (For further detail please see Page No: 3&amp; 4)</p> <p><b><u>Global System for Mobile (GSM)</u></b></p> <ul style="list-style-type: none"> <li>• GSM History</li> <li>• GSM Specifications</li> <li>• GSM Band Spectrum</li> <li>• GSM Benefits</li> <li>• Growth in Wireless Data</li> <li>• Mobile Data Technology Evolution</li> <li>• GPRS (General Packet Radio Services)</li> </ul> <p><b><u>Basic Network Overview</u></b></p> <ul style="list-style-type: none"> <li>• Traffic/signaling</li> <li>• Network overview</li> </ul>	<p><b>Task-6</b> <b>Task-7</b></p> <p>(Details may be seen at Annexure-I)</p>

		<ul style="list-style-type: none"> <li>• SIM-Card and mobile Equipment</li> <li>• SIM-Card Function</li> <li>• Mobile Identification</li> <li>• Trends in mobile Station</li> <li>• Services</li> <li>• Tele services</li> <li>• Supplementary Services</li> <li>• Intelligent Network Services</li> <li>• Cellular Principles</li> <li>• GSM Radio Subsystem</li> <li>• GSM Channel Types</li> <li>• Functions and Protocols</li> </ul>	
<b>Week 3</b>	<b>Repair Methodology</b>	<p><b>Motivational Lecture (For further detail please see Page No: 3&amp; 4)</b></p> <ul style="list-style-type: none"> <li>• Instruction to repair system for mobile phone handset</li> <li>• General block diagram of mobile phones</li> <li>• Inspection procedure</li> <li>• Fault diagnoses procedure</li> <li>• Trouble shooting procedure.</li> <li>• Block diagram of mobile phone Nokia series</li> <li>• Block diagram of mobile phone, Samsung series.</li> <li>• Block diagram of mobile phone, Oppo series.</li> <li>• Block diagram of mobile phone, Panasonic series</li> <li>• Block diagram of mobile phone, LG series</li> <li>• Block diagram of mobile phone, Huawei mobile series</li> </ul>	<p><b>Task-8</b> <b>Task-9</b> <b>Task-10</b> (Details may be seen at Annexure-I)</p> <p><b>Home Assignment-1</b> (Details may be seen at Annexure-II)</p>
	<b>Build your CV</b>	<p>Download professional CV template from any good site (<a href="https://www.coolfreecv.com">https://www.coolfreecv.com</a> or relevant)</p> <ul style="list-style-type: none"> <li>• Add Personal Information</li> <li>• Add Educational details</li> <li>• Add Experience/Portfolio</li> <li>• Add contact details/profile links</li> </ul>	

<p><b>Week 4</b></p>	<p><b>Testing method with Measuring Instrument</b></p>	<p><b>Success stories</b> (For further detail please see Page No: 3&amp; 4)</p> <ul style="list-style-type: none"> <li>• How to operate Microscope.</li> <li>• How to operate the Hot air gun.</li> <li>• How to operate the soldering station.</li> <li>• How to operate the Rework station</li> <li>• How to operate the Soldering lead</li> <li>• How to operate the soldering paste</li> <li>• How to operate the De-soldering wire</li> <li>• Demonstration to replace SMD, Exchange SMD components</li> <li>• Repairing steps</li> <li>• Repairing tips.</li> </ul>	<p><b>Task-11</b> <b>Task-12</b> <b>Task-13</b> <b>Task-14</b> <b>Task-15</b></p> <p>(Details may be seen at Annexure-I)</p> <p><b>Monthly Test 1</b></p>
<p><b>Week 5</b></p>	<p><b>Troubleshooting</b></p>	<p><b>Motivational Lecture</b> (For further detail please see Page No: 3&amp; 4)</p> <p><b><u>Basic of Trouble Shooting</u></b></p> <ul style="list-style-type: none"> <li>• How to Replace the Microphone</li> <li>• How to Replace the Antenna</li> <li>• How to Replace the Speaker</li> <li>• How to Replace the battery terminal</li> <li>• How to Change the Pin</li> <li>• How to Replace the Vibrator</li> <li>• How to Replace the Charging IC</li> <li>• How to Replace the Filter cap</li> <li>• How to replace the display</li> <li>• How to replace the transmitter</li> </ul>	<p><b>Task-16</b> <b>Task-17</b> <b>Task-18</b> <b>Task-19</b> <b>Task-20</b> <b>Task-21</b> <b>Task-22</b> <b>Task-23</b> <b>Task-24</b></p> <p>(Details may be seen at Annexure-I)</p>
<p><b>Week 6</b></p>	<p><b>Troubleshooting</b></p>	<p><b>Success stories</b> (For further detail please see Page No: 3&amp; 4)</p> <p><b><u>Troubleshooting of Software Problems</u></b></p> <ul style="list-style-type: none"> <li>• Introduction of Software problem of a Handset</li> <li>• Introduction of requirements (Basic knowledge)</li> <li>• How to identify the software problem of different models of handsets</li> <li>• What is the cause of this problem?</li> <li>• What is the effect of this problem?</li> <li>• Cleaning Brush (Skills and Techniques)</li> <li>• Repairing Steps</li> <li>• Repairing Tips</li> <li>• Demonstration</li> <li>• How to use the appropriate equipment and software for troubleshooting</li> </ul>	<p><b>Task-25</b> <b>Task-26</b> <b>Task-27</b> <b>Task-28</b> <b>Task-29</b> <b>Task-30</b> <b>Task-31</b> <b>Task-32</b> <b>Task-33</b> <b>Task-34</b> <b>Task-35</b></p> <p>(Details may be seen at Annexure-I)</p>

		<ul style="list-style-type: none"> <li>• Practice</li> </ul> <p><b><u>Trouble shooting of Nokia Series</u></b></p> <ul style="list-style-type: none"> <li>• Replacement of Microphone</li> <li>• Replacement of Antenna/Transmitter</li> <li>• Replacement of Speaker</li> <li>• Replacement of battery terminal</li> <li>• Charging Pin</li> <li>• Replacement of Vibrator</li> <li>• Replacement of Charging IC</li> <li>• Replacement of Filter cap</li> <li>• Replacement of display</li> </ul>	
<b>Overview of the previous weeks &amp; Mid Term Examination</b>			
<b>Week 7</b>	<b>Troubleshooting</b>	<p><b>Motivational Lecture (For further detail please see Page No: 3&amp; 4)</b></p> <p><b><u>Trouble shooting of Samsung Series</u></b></p> <ul style="list-style-type: none"> <li>• Replacement of Microphone</li> <li>• Replacement of Antenna/Transmitter</li> <li>• Replacement of Speaker</li> <li>• Replacement of battery terminal</li> <li>• Charging Pin</li> <li>• Replacement of Vibrator</li> <li>• Replacement of Charging IC</li> <li>• Replacement of Filter cap</li> <li>• Replacement of display</li> </ul> <p><b><u>Trouble shooting of Oppo Series</u></b></p> <ul style="list-style-type: none"> <li>• Replacement of Microphone</li> <li>• Replacement of Antenna/Transmitter</li> <li>• Replacement of Speaker</li> <li>• Replacement of battery terminal</li> <li>• Charging Pin</li> <li>• Replacement of Vibrator</li> <li>• Replacement of Charging IC</li> <li>• Replacement of Filter cap</li> <li>• Replacement of display</li> </ul>	<p><b>Task-36</b>  <b>Task-37</b>  <b>Task-38</b>  <b>Task-39</b>  <b>Task-40</b>  <b>Task-41</b>  <b>Task-42</b>  <b>Task-43</b>  <b>Task-44</b></p> <p>(Details may be seen at Annexure-I)</p>

<b>Week 8</b>	<b>Troubleshooting</b>	<p><b>Success stories</b> (<i>For further detail please see Page No: 3&amp; 4</i>)</p> <p><b><u>Trouble shooting of Panasonic Series.</u></b></p> <ul style="list-style-type: none"> <li>• Replacement of Microphone</li> <li>• Replacement of Antenna/Transmitter</li> <li>• Replacement of Speaker</li> <li>• Replacement of battery terminal</li> <li>• Charging Pin</li> <li>• Replacement of Vibrator</li> <li>• Replacement of Charging IC</li> <li>• Replacement of Filter cap</li> <li>• Replacement of display</li> </ul> <p><b><u>Trouble shooting of LG Series.</u></b></p> <ul style="list-style-type: none"> <li>• Replacement of Microphone</li> <li>• Replacement of Antenna/Transmitter</li> <li>• Replacement of Speaker</li> <li>• Replacement of battery terminal</li> <li>• Charging Pin</li> <li>• Replacement of Vibrator</li> <li>• Replacement of Charging IC</li> <li>• Replacement of Filter cap</li> <li>• Replacement of display</li> </ul>	<p><b>Task-45</b> <b>Task-46</b> <b>Task-47</b> <b>Task-48</b> <b>Task-49</b> <b>Task-50</b> <b>Task-51</b> <b>Task-52</b> <b>Task-53</b></p> <p>(Details may be seen at Annexure-I)</p> <p><b>Home Assignment-2</b> (Details may be seen at Annexure-II)</p>
	<b>Create an account profile on Fiverr (at least two gigs) and Upwork</b>	Create an account by following these steps: Step 1: Personal Info Step 2: Professional Info Step 3: Linked Accounts Step 4: Account Security	
<b>Week 9</b>	<b>Troubleshooting</b>	<p><b>Motivational Lecture</b> (<i>For further detail please see Page No: 3&amp; 4</i>)</p> <p><b><u>Trouble shooting of Huawei Series.</u></b></p> <ul style="list-style-type: none"> <li>• Replacement of Microphone</li> <li>• Replacement of Antenna/Transmitter</li> <li>• Replacement of Speaker</li> <li>• Replacement of battery terminal</li> <li>• Charging Pin</li> <li>• Replacement of Vibrator</li> <li>• Replacement of Charging IC</li> </ul>	<p><b>Task-54</b> <b>Task-55</b></p> <p>(Details may be seen at Annexure-I)</p>

		<ul style="list-style-type: none"> <li>• Replacement of Filter cap</li> <li>• Replacement of display</li> </ul> <p><b><u>Repairing IMEI, Unlock SP Lock and Up gradation of Software Version of Hand set</u></b></p> <ul style="list-style-type: none"> <li>• Introduction of the requirements (Basic Knowledge)</li> <li>• What is IMEI</li> <li>• What is Phone Lock</li> <li>• What is SIM lock</li> <li>• What is the requirements to upgrade the handset?</li> <li>• Tools and equipment</li> <li>• Introduction of the related equipment and software to do the job</li> <li>• Skills and techniques</li> <li>• Repairing steps</li> <li>• Repairing tips</li> <li>• Demonstration</li> <li>• How to use the appropriate equipment and software for repairing.</li> </ul>	<b>Monthly Test 2</b>
<b>Week 10</b>	<b>Troubleshooting</b>	<p><b>Success stories</b> <i>(For further detail please see Page No: 3&amp; 4)</i></p> <p><b><u>Practice Handset circuit analysis and troubleshooting for Nokia.</u></b></p> <ul style="list-style-type: none"> <li>• Identification of Location of major components mounted on the PCB</li> <li>• Identification of Major circuits on the PCB</li> <li>• Common faults symptoms analysis</li> <li>• Repair flow</li> <li>• Repair tips</li> <li>• Demonstration</li> <li>• Troubleshooting on both software and hardware problems</li> </ul> <p><b><u>Practice Handset circuit analysis and troubleshooting for Samsung.</u></b></p> <ul style="list-style-type: none"> <li>• Identification of Location of major components mounted on the PCB</li> <li>• Identification of Major circuits on the PCB</li> <li>• Common faults symptoms analysis</li> </ul>	<b>Task-56 Task-57 Task-58 Task-59</b>  (Details may be seen at Annexure-I)

		<ul style="list-style-type: none"> <li>• Repair flow</li> <li>• Repair tips</li> <li>• Demonstration</li> <li>• Troubleshooting on both software and hardware problems</li> </ul>	
<b>Week 11</b>	<b>Troubleshooting</b>	<p><b>Motivational Lecture (For further detail please see Page No: 3&amp; 4)</b></p> <p><b><u>Practice Handset circuit analysis and troubleshooting for Oppo.</u></b></p> <ul style="list-style-type: none"> <li>• Identification of Location of major components mounted on the PCB</li> <li>• Identification of Major circuits on the PCB</li> <li>• Common faults symptoms analysis</li> <li>• Repair flow</li> <li>• Repair tips</li> <li>• Demonstration</li> <li>• Troubleshooting on both software and hardware problems</li> </ul> <p><b><u>Practice Handset circuit analysis and troubleshooting for Panasonic.</u></b></p> <ul style="list-style-type: none"> <li>• Identification of Location of major components mounted on the PCB</li> <li>• Identification of Major circuits on the PCB</li> <li>• Common faults symptoms analysis</li> <li>• Repair flow</li> <li>• Repair tips</li> <li>• Demonstration</li> <li>• Troubleshooting on both software and hardware problems</li> </ul>	<p><b>Task-60</b>  <b>Task-61</b>  <b>Task-62</b>  <b>Task-63</b></p> <p>(Details may be seen at Annexure-I)</p>
	<b>How to search and apply for jobs in at least two labor marketplace countries (KSA, UAE, etc.)</b>	<ul style="list-style-type: none"> <li>• Browse the following website and create an account on each website <ul style="list-style-type: none"> <li>▪ Bayt.com – The Middle East Leading Job Site</li> <li>▪ Monster Gulf – The International Job Portal</li> <li>▪ Gulf Talent – Jobs in Dubai and the Middle East</li> </ul> </li> <li>• Find the handy ‘search’ option at the top of your homepage to search for the jobs that best suit your skills.</li> <li>• Select the job type from the first ‘Job</li> </ul>	

		<p>Type' drop-down menu, next, select the location from the second drop-down menu.</p> <ul style="list-style-type: none"> <li>• Enter any keywords you want to use to find suitable job vacancies.</li> <li>• On the results page you can search for part-time jobs only, full-time jobs only, employers only, or agencies only. Tick the boxes as appropriate to your search.</li> <li>• Search for jobs by: <ul style="list-style-type: none"> <li>▪ Company</li> <li>▪ Category</li> <li>▪ Location</li> <li>▪ All jobs</li> <li>▪ Agency</li> </ul> </li> <li>• Industry</li> </ul>	
<p><b>Week 12</b></p>	<p><b>Troubleshooting</b></p>	<p><b>Success stories</b> (For further detail please see Page No: 3&amp; 4)</p> <p><b><u>Practice Handset circuit analysis and troubleshooting for LG.</u></b></p> <ul style="list-style-type: none"> <li>• Identification of Location of major components mounted on the PCB</li> <li>• Identification of Major circuits on the PCB</li> <li>• Common faults symptoms analysis</li> <li>• Repair flow</li> <li>• Repair tips</li> <li>• Demonstration</li> <li>• Troubleshooting on both software and hardware problems</li> </ul> <p><b><u>Practice Handset circuit analysis and troubleshooting for Huawei.</u></b></p> <ul style="list-style-type: none"> <li>• Identification of Location of major components mounted on the PCB</li> <li>• Identification of Major circuits on the PCB</li> <li>• Common faults symptoms analysis</li> <li>• Repair flow</li> <li>• Repair tips</li> <li>• Demonstration</li> </ul> <p>Troubleshooting on both software and hardware problems</p>	<p><b>Task-64</b> <b>Task-65</b> <b>Task-66</b> <b>Task-67</b></p> <p>(Details may be seen at Annexure-I)</p> <p><b>Final Assessment</b></p>



	<p><b>Entrepreneurship and Final Assessment in project</b></p>	<ul style="list-style-type: none"> <li>• Job Market Searching</li> <li>• Self-employment</li> <li>• Introduction</li> <li>• Fundamentals of Business Development</li> <li>• Entrepreneurship</li> <li>• Startup Funding</li> <li>• Business Incubation and Acceleration</li> <li>• Business Value Statement</li> <li>• Business Model Canvas</li> <li>• Sales and Marketing Strategies</li> <li>• How to Reach Customers and Engage CxOs</li> <li>• Stakeholders Power Grid</li> <li>• RACI Model, SWOT Analysis, PEST Analysis</li> <li>• SMART Objectives</li> <li>• OKRs</li> </ul> <p>Cost Management (OPEX, CAPEX, ROCE etc.)</p>	
<p><b>Projects &amp; Final Assessment</b></p>			

## Annexure-I

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

### Tasks for Mobile Phone Repairing

Task No.	Task Description	Week
1.	Explore Mobile Radio System Around the world.	Week-1
2.	Explore Cordless Telephone system.	
3.	Explore Cellular Telephone System	
4.	Explore Types of Multiplexing.	
5.	Explore Multiple Access system.	
6.	Explore Global System for Mobile (GSM)	Week-2
7.	Explore SIM card Function.	
8.	Explore Block diagram of different mobile phone series.	Week-3
9.	Explore Fault diagnoses procedure	
10.	Explore Trouble shooting procedure	
11.	Operate Microscope.	Week-4
12.	Operate the Hot air gun.	
13.	Operate the soldering station.	
14.	Operate the Rework station	
15.	Demonstrate the replacement of SMD components	
16.	Replace the Microphone of Non- android mobile phone.	Week-5
17.	Replace the Antenna of Non- android mobile phone.	
18.	Replace the Speaker of Non- android mobile phone.	
19.	Replace the battery terminal of Non- android mobile phone.	
20.	Change the Pin of Non- android mobile phone.	
21.	Replace the Vibrator of Non- android mobile phone.	
22.	Replace the Charging IC of Non- android mobile phone.	
23.	Replace the display of Non- android mobile phone.	
24.	Replace the transmitter of Non- android mobile phone.	
25.	Identify the software problem of different models of handsets	Week-6
26.	Use the appropriate equipment and software for troubleshooting	

27.	Replace Microphone of Nokia Series		
28.	Replace Antenna/Transmitter of Nokia Series mobile		
29.	Replace Speaker of Nokia Series Mobile		
30.	Replace battery terminal of Nokia Series Mobile		
31.	Replace Charging Pin of Nokia Series Mobile		
32.	Replace Vibrator of Nokia Series Mobile		
33.	Replace Charging IC of Nokia Series Mobile		
34.	Replace Filter cap of Nokia Series Mobile		
35.	Replace display of Nokia Series Mobile		
36.	Replace Microphone of Samsung & Oppo Series Mobile		Week-7
37.	Replace Antenna/Transmitter of Samsung & Oppo Series Mobile		
38.	Replace Speaker of Samsung & Oppo Series Mobile		
39.	Replace battery terminal of Samsung & Oppo Series Mobile		
40.	Replace Charging Pin of Samsung & Oppo Series Mobile		
41.	Replace Vibrator of Samsung & Oppo Series Mobile		
42.	Replace Charging IC of Samsung & Oppo Series Mobile		
43.	Replace Filter cap of Samsung & Oppo Series Mobile		
44.	Replace display of Samsung & Oppo Series Mobile		
45.	Replace Microphone of Panasonic & LG Series Mobile	Week-8	
46.	Replace Antenna/Transmitter of Panasonic & LG Series Mobile		
47.	Replace Speaker of Panasonic & LG Series Mobile		
48.	Replace battery terminal of Panasonic & LG Series Mobile		
49.	Replace Charging Pin of Panasonic & LG Series Mobile		
50.	Replace Vibrator of Panasonic & LG Series Mobile		
51.	Replace Charging IC of Panasonic & LG Series Mobile		
52.	Replace Filter cap of Panasonic & LG Series Mobile		
53.	Replace display of Panasonic & LG Series Mobile		
54.	Explore Phone Lock, SIM lock and IMEI	Week-9	
55.	Explore the requirements to upgrade the handset.		
56.	Identify the Location of major components mounted on the PCB for Nokia and Samsung series Mobile	Week-10	
57.	Identify the Major circuits on the PCB for Nokia and Samsung series Mobile		
58.	Identify the Common faults symptoms for Nokia and Samsung series Mobile		
59.	Troubleshoot, both software and hardware problems for for Nokia and Samsung series Mobile		

<b>60.</b>	Identify the Location of major components mounted on the PCB for Oppo Panasonic series Mobile	Week-11
<b>61.</b>	Identify the Major circuits on the PCB for Oppo Panasonic series Mobile	
<b>62.</b>	Identify the Common faults symptoms for Oppo Panasonic series Mobile	
<b>63.</b>	Troubleshoot, both software and hardware problems for Oppo Panasonic series Mobile	
<b>64.</b>	Identify the Location of major components mounted on the PCB for LG and Huawei mobile series.	Week-12
<b>65.</b>	Identify the Major circuits on the PCB for LG and Huawei mobile series.	
<b>66.</b>	Identify the Common faults symptoms for LG and Huawei mobile series.	
<b>67.</b>	Troubleshoot, both software and hardware problems for LG and Huawei mobile series.	

## Home Assignment

### ***Designing Effective Homework***

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

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

### ***Characteristics of Good Assignments***

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

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

### ***Homework Don'ts***

Do not assign homework that:

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

## Mobile Phone Repairing

### MOTIVATIONAL LECTURES LINKS.

TOPIC	SPEAKER	LINK
How to Face Problems In Life	Qasim Ali Shah	<a href="https://www.youtube.com/watch?v=OrQte08MI90">https://www.youtube.com/watch?v=OrQte08MI90</a>
Just Control Your Emotions	Qasim Ali Shah	<a href="https://www.youtube.com/watch?v=JzFs_yJt-w">https://www.youtube.com/watch?v=JzFs_yJt-w</a>
How to Communicate Effectively	Qasim Ali Shah	<a href="https://www.youtube.com/watch?v=PhHAQEGehKc">https://www.youtube.com/watch?v=PhHAQEGehKc</a>
Your ATTITUDE is Everything	Tony Robbins Les Brown David Goggins Jocko Willink Wayne Dyer Eckart Tolle	<a href="https://www.youtube.com/watch?v=5fS3rj6eIFg">https://www.youtube.com/watch?v=5fS3rj6eIFg</a>
Control Your EMOTIONS	Jim Rohn Les Brown TD Jakes Tony Robbins	<a href="https://www.youtube.com/watch?v=chn86sH0O5U">https://www.youtube.com/watch?v=chn86sH0O5U</a>
Defeat Fear, Build Confidence	Shaykh Atif Ahmed	<a href="https://www.youtube.com/watch?v=s10dzfbozd4">https://www.youtube.com/watch?v=s10dzfbozd4</a>
Wisdom of the Eagle	Learn Kurooji	<a href="https://www.youtube.com/watch?v=bEU7V5rJTtw">https://www.youtube.com/watch?v=bEU7V5rJTtw</a>
The Power of ATTITUDE	Titan Man	<a href="https://www.youtube.com/watch?v=r8LJ5X2ejqU">https://www.youtube.com/watch?v=r8LJ5X2ejqU</a>
STOP WASTING TIME	Arnold Schwarzenegger	<a href="https://www.youtube.com/watch?v=kzSBrJmXgdg">https://www.youtube.com/watch?v=kzSBrJmXgdg</a>
Risk of Success	Denzel Washington	<a href="https://www.youtube.com/watch?v=tbnzAVRZ9Xc">https://www.youtube.com/watch?v=tbnzAVRZ9Xc</a>

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](https://www.youtube.com/watch?v=CHm_BH7xAXk)

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

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

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

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

### Workplace/Institute Ethics Guide

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

The following ten work ethics are defined as essential for employee's success:

**1. Attendance:**

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

**2. Character:**

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

**3. Team Work:**

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

**4. Appearance:**

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

**5. Attitude:**

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

**6. Productivity:**

Do the work correctly, quality and timelines are prized. Get along with fellows, cooperation is the key to productivity. Help out whenever asked, do extra without being asked. Take pride in your



work, do things the best you know how. Eagerly focuses energy on accomplishing tasks, also referred to as demonstrating ownership. Takes pride in work.

**7. Organizational Skills:**

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

**8. Communication:**

**Written communication**, being able to correctly write reports and memos.

**Verbal communications**, being able to communicate one on one or to a group.

**9. Cooperation:**

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

**10. Respect:**

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



### **Suggestive Format and Sequence Order of Success Story**

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

**Note: Success story is a source of motivation for the trainees and can be presented in 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.