CONTENTS

- INTRODUCTION
- MACHINE SHOP
- CNC SHOP
- FORGING SHOP
- FITTING SHOP
- WOOD WORK SHOP
- FOUNDRY SHOP
- WELDING SHOP
M. Sarwar Siddiqui
Sr. Workshop Superintendent
INTRODUCTION TO MECHANICAL ENGINEERING WORKSHOP

Mechanical Engineering Workshop is a place where students acquire knowledge on the operation of various processes involved in manufacturing and production. The Workshop Practice course makes students competent in handling practical work in engineering environment. Mechanical Engineering Workshop is also involved in different maintenance/repair works for University.
Machine shop is a place in which metal parts are cut to the required size and put together to form mechanical units or machines.

The machines so made are to be used directly or indirectly in the production of necessities and luxuries of civilization.

Machine shop is the base of all mechanical production.
INCHARGE MACHINE SHOP

Engr. Ameer Ali Memon
Sr. Workshop Instructor
SUPPORTING STAFF OF MACHINE SHOP

- Shabbir Shaikh: Trade Technician
- Abid Ali Pathan: Jr. Trade Technician
- Saddaruddin Chandio: Helper
- Zeeshan Ali Mirza: Helper
- Munawer Ali Sahito: Helper
EQUIPMENT

- LATHE MACHINE 19
- MILLING MACHINE 02
- SHAPER MACHINE 02
- POWER HACKSAW MACHINE 01
- DRILLING MACHINE 01
- SURFACE GRINDER 01
- TOOL GRINDER 01
Numerical control (NC) is the automation of machine tools that are operated by abstractly programmed commands encoded on a storage medium, as opposed to controlled manually via hand wheels or levers, or mechanically automated via cams alone. Most NC today is computer numerical control (CNC), in which computers play an integral part of the control.

In modern CNC systems, end-to-end component design is highly automated using computer-aided design (CAD) and computer-aided manufacturing (CAM) programs. The programs produce a computer file that is interpreted to extract the commands needed to operate a particular machine via a postprocessor, and then loaded into the CNC machines for production. Since any particular component might require the use of a number of different tools – drills, saws, etc., modern machines often combine multiple tools into a single "cell". In other cases, a number of different machines are used with an external controller and human or robotic operators that move the component from machine to machine. In either case, the complex series of steps needed to produce any part is highly automated and produces a part that closely matches the original CAD design.
CAD/CAM Lab

In Computer Aided Design / Computer Aided Manufacturing (CAD/CAM) Lab, different jobs are accomplished with the help of Boxford CAD CAM Design Tools Software, CNC Mill & CNC Lathe Software.

These software are very useful for an engineering student. Students are required to design and manufacture different types of objects.
INCHARGE CNC SHOP /CAD CAM LAB

Engr. Mujeeb Iqbal Soomro
Sr. Workshop Instructor
SUPPORTING STAFF OF CNC SHOP /CAD CAM LAB

- Saeed A. Memon I.T Assistant
- Rizwan Shaikh Electrician
- Ashfaque Panhwar Helper
- Kamran Ali Memon Helper
EQUIPMENT

- BOXFORD LATHE MACHINE  01
- BOXFORD MILLING MACHINE  01
- PMTF LATHE MACHINE  01
- PMTF MILLING MACHINE  01
The Mechanical working of the metal is the shaping of the metal in either cold state or hot state. This does not include machining, grinding or casting. But in Mechanical working of the metal, the metal is shaped by “pressure” actually, in which forging, bending, twisting, drawing etc are done bring it to its final shape. In these processes some metals are shaped in both cold and hot worked.
INCHARGE FORGING SHOP

Engr. Afaque Rafique Memon
Sr. Workshop Instructor
SUPPORTING STAFF OF FORGING SHOP

- Anwar Ali Sahito Jr. Trade Technician
- Karam Ali Helper
EQUIPMENT

- FORGING FURNACE  07
- SURFACE GRINDER   01
- ELECTRIC DRILLING MACHINE  01
JOBS OF FORGING SHOP

FORGING FURNACE
Fitting shop is a place where fitting or assembling work is carried out. Some repair / maintenance and Die punch work is also carried out in Fitting shop.
INCHARGE FITTING SHOP

Mr. Jamil Ahmed Mangi
Workshop Instructor
SUPPORTING STAFF OF FITTING SHOP

- Bismillah Jamali  Helper
- Raza Muhammad Khaskheli  Helper
A VIEW OF FITTING SHOP

JOBS FINISHED IN FITTING SHOP
WOODWORK SHOP

The wood is obtained from the trees. In Woodwork shop students are trained to work on wooden jobs by using various hand tools and machines.
INCHARGE WOOD WORK SHOP

Mr. Abdul Qadir Jamali
Workshop Instructor
SUPPORTING STAFF OF WOODWORK SHOP

- Lakhadino Soomro  Carpenter
- Maqbool Ahmed Memon  Carpenter
- Arshad Hussain  Jr. Trade Technician
- Bakhsahl Lashari  Jr. Trade Technician
EQUIPMENT

- UNIVERSAL PLANING MACHINE  02
- POWER BEND SAW MACHINE       01
A VIEW OF WOODWORK SHOP

UNIVERSAL PLANING MACHINE
Foundry is one of the manufacturing process by which a desired shape of metal is obtained by heating up to its molten state (liquid state), and pouring into mould cavity. After some time metal is allowed to cool and solidify. The solidified piece of metal is known as casting.
Engr. Pir Jawed Ahmed Sarhandi
Workshop Instructor
SUPPORTING STAFF OF FOUNDRY SHOP

- Mr. Sawan Khan, Moulder
- Mr. Barkat Ali, Jr. Trade Technician
EQUIPMENT

- CRUCIBLE FURNACE  01
- CUPOLA FURNACE  01
WELDING SHOP

It is the process of permanent fastening where two metals are fused at the temperature of 3200°C (when metals are melted). The most common types of welding are:

1. Electric Arc Welding
2. Gas Welding (Oxy Acetylene Welding)
3. Resistance Welding
4. Forge or Fire Welding
INCHARGE WELDING SHOP

Mr. Jamil Ahmed Mangi
Workshop Instructor
SUPPORTING STAFF OF FOUNDRY SHOP

- Mr. Liaquat Soomro, Shop Assistant
- Mr. Anees Ali, Welder
- Mr. Sarfaraz, Welder
- Mr. Shahab Soomro, Helper
EQUIPMENT

- Electric Arc Welding 02
- Gas Welding (Oxy Acetylene Welding) 02
- Resistance Welding 01
- TIG welding 02
A VIEW OF WELDING SHOP