



Installation Report (Phase 2): Civil, Mechanical, and Electrical/Electronic Laboratory

Date of Installation: March 24th 2025

Location: USET Brikama Campus

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Summary

This report provides an overview of the successful installation of Phase 2 equipment for the Civil, Electrical/Electronic, and Mechanical Laboratories at The Gambia University of Applied Science, Engineering, and Technology (USET) Brikama Campus. The installation process involved several key stages, including planning, identifying equipment for each department, setting up the equipment in the laboratory spaces, and finally, tagging the various pieces of equipment. The completion of this project represents a significant milestone in strengthening educational and research capabilities in civil, mechanical, and electrical/electronic engineering at USET.

Introduction

The installation project aimed to establish fully functional laboratories catering to civil, mechanical, and electrical/electronic engineering disciplines. The laboratories are designed to facilitate hands-on learning, research, and experimentation for students, faculty, and researchers. The installation process adhered to industry standards and safety protocols to ensure the efficiency and reliability of laboratory operations.

Planning

To ensure a smooth and successful installation process, the USET-STEE team carried out a comprehensive planning phase. The team carefully analyzed the optimal locations, timeline, and personnel required for installing the laboratory equipment. Every aspect of the installation, including layout design, equipment requirements, and safety protocols, was meticulously considered to ensure precision and efficiency. The project team also engaged with faculty members, the construction consultant, the contractor of the USET Brikama campus, and other relevant stakeholders to align the installations with academic and research objectives.

Layout Design

The USET Brikama Campus facility is divided into four blocks: Block A (Civil), Block B (Electrical/Electronic), Block C (Mechanical), and Block D (Administrative and Auditorium). The installation process will follow the design provided by the facility consultant. Blocks

A, B, and C each consist of three floors, which include classrooms, offices, studios, labs, and workshops. Each of these facilities is clearly marked on the campus floor plan, which will dictate the placement of the equipment.

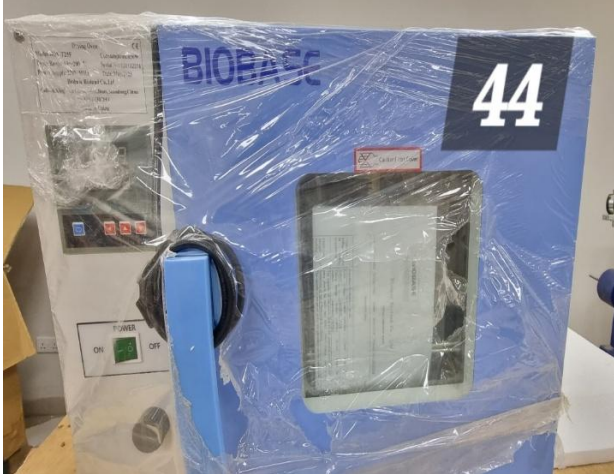
Laboratory Features (Lot 1)

Civil Engineering Laboratories

1. MATERIALS TESTING LAB
2. SOIL LAB
3. SURVEYING LAB

No.	Lab	ITEMS	QTY	TAG NUMBER	PICTURE
#1	MATERIALS TESTING LAB EQUIPMENT	Nordic Abrasion Machine	1	USET/ACE IMPACT/1325/2025	

#2	MATERIALS TESTING LAB EQUIPMENT	Aggregate Crushing Value (Acv) Sets	1	USET/ACE IMPACT/1326/2025	
#3	MATERIALS TESTING LAB EQUIPMENT	Rapid Moisture Meter	1	USET/ACE IMPACT/1327/2025	

#4	MATERIALS TESTING LAB EQUIPMENT	Wide Wheel Abrasion Testing Machine	1	USET/ACE IMPACT/1328/2025	
#5	MATERIALS TESTING LAB EQUIPMENT	Forced Air drying oven	1	USET/ACE IMPACT/1329/2025	

#6	MATERIALS TESTING LAB EQUIPMENT	Length Gauge (Elongation Index BS)	1	USET/ACE IMPACT/1330/2025	
#7	MATERIALS TESTING LAB EQUIPMENT	Riffler Sample Divider/Riffle Box	1	USET/ACE IMPACT/1331/2025	

#8	MATERIALS TESTING LAB EQUIPMENT	Laboratory Pan Mixer	1	USET/ACE IMPACT/1332/2025	
#9	MATERIALS TESTING LAB EQUIPMENT	Vibrating Table And Moulds	1	USET/ACE IMPACT/1333/2025	

#10	MATERIALS TESTING LAB EQUIPMENT	Concrete Shrinkage And Expansion Apparatus	1	USET/ACE IMPACT/1334/2025	
#11	MATERIALS TESTING LAB EQUIPMENT	Cleveland Open Cup Flash Point Tester	1	USET/ACE IMPACT/1335/2025	

#12	MATERIALS TESTING LAB EQUIPMENT	Automatic Ring And Ball Apparatus	1	USET/ACE IMPACT/1336/2025	
#13	MATERIALS TESTING LAB EQUIPMENT	Automatic Asphalt Mixture Mixer	2	USET/ACE IMPACT/1337/2025	

#14	MATERIALS TESTING LAB EQUIPMENT	Ductility Testing Machine	1	USET/ACE IMPACT/1338/2025	
#15	MATERIALS TESTING LAB EQUIPMENT	Rolling Thin Film Oven	1	USET/ACE IMPACT/1339/2025	

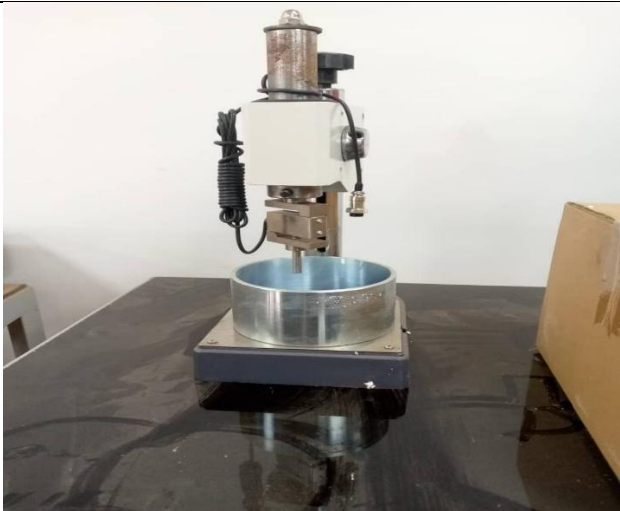
#16	MATERIALS TESTING LAB EQUIPMENT	Asphalt Moisture Content Tester	2	USET/ACE IMPACT/1340/2025	
#17	MATERIALS TESTING LAB EQUIPMENT	Concrete Curing Cabinet	1	USET/ACE IMPACT/1342/2025	

#18	MATERIALS TESTING LAB EQUIPMENT	Concrete Cylinder Capping Device	1	USET/ACE IMPACT/1343/2025	
#19	MATERIALS TESTING LAB EQUIPMENT	Marshal Digital Machine 30kn	1	USET/ACE IMPACT/1345/2025	

#20	MATERIALS TESTING LAB EQUIPMENT	Los Angeles Materials Testing Machine	1	USET/ACE IMPACT/1346/2025	
#21	MATERIALS TESTING LAB EQUIPMENT	Aggregate Impact Tester with Counter Meter	1	USET/ACE IMPACT/1347/2025	

#22	MATERIALS TESTING LAB EQUIPMENT	Laboratory Mortar Mixer	1	USET/ACE IMPACT/1348/2025	
#23	MATERIALS TESTING LAB EQUIPMENT	Cement Flow Table	1	USET/ACE IMPACT/1348/2024	

#24	MATERIALS TESTING LAB EQUIPMENT	Digital Length Comparator	1	USET/ACE IMPACT/1350/2025	
#25	MATERIALS TESTING LAB EQUIPMENT	Cement Curing Cabinet	1	USET/ACE IMPACT/1351/2025	

#26	MATERIALS TESTING LAB EQUIPMENT	Digital Mortar Setting Time Tester	1	USET/ACE IMPACT/1352/2025	
#27	MATERIALS TESTING LAB EQUIPMENT	Iso Standard Vicat Apparatus	1	USET/ACE IMPACT/1353/2025	

#28	MATERIALS TESTING LAB EQUIPMENT	Concrete Pressure Air Meter	1	USET/ACE IMPACT/1354/2025	
#29	MATERIALS TESTING LAB EQUIPMENT	Steel bar/rebar/ Steel pipe Bending Testing Machine	1	USET/ACE IMPACT/1355/2025	

#30	MATERIALS TESTING LAB EQUIPMENTS	Core Cutting Machine	2	USET/ACE IMPACT/1356/2034	
#31	MATERIALS TESTING LAB EQUIPMENT	Slump Test Apparatus	1	USET/ACE IMPACT/1357/2025	
#32	MATERIALS TESTING LAB EQUIPMENT	Specific Gravity Test Apparatus	1	USET/ACE IMPACT/1358/2025	

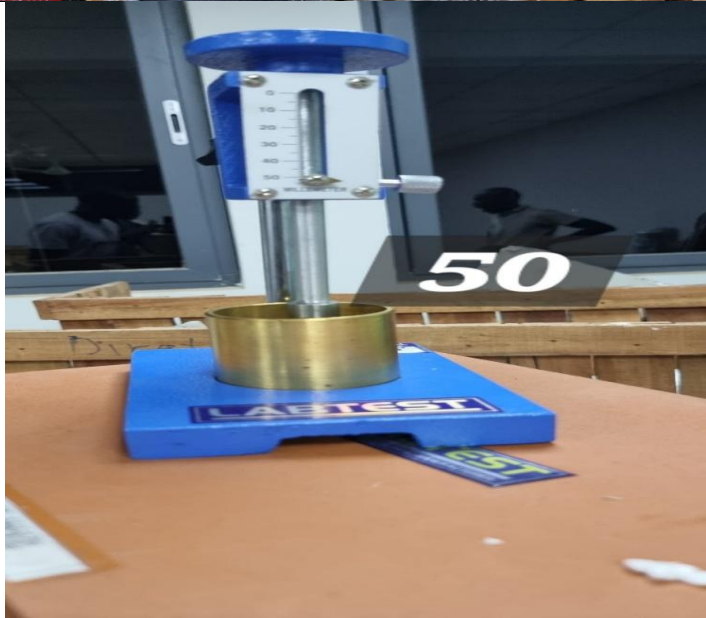
					
#33	MATERIA LS TESTING LAB EQUIPME NT	Hydrostatic Balance	1	USET/ACE IMPACT/1359/2025	

#34	SOIL LAB	Posthole Type Auger	3	USET/ACE IMPACT/1361/2025	
#35	SOIL LAB	Dynamic Cone Penetrometer	2	USET/ACE IMPACT/1362/2025	

#36	SOIL LAB	Sand Density Cone Apparatus	4	USET/ACE IMPACT/1363/2025	
#37	SOIL LAB	Automatic CBR Test Apparatus	2	USET/ACE IMPACT/1365/2025	

#38	SOIL LAB	CBR Standard Compaction Test Equipments	3	USET/ACE IMPACT/1366/2025	
#39	SOIL LAB	Hydraulic Universal Extruder ZI 3045 Frame	2	USET/ACE IMPACT/1367/20425	

#40	SOIL LAB	Liquid Limit Device With Counter	4	USET/ACE IMPACT/1368/2025	
#41	SOIL LAB	Plastic Limit Set	1	USET/ACE IMPACT/1370/2025	

#42	SOIL LAB	Liquid Limit Device (Motorised)	2	USET/ACE IMPACT/1371/2025	
#43	SOIL LAB	Soil Cone Penetrometer	1	USET/ACE IMPACT/1372/2025	

#44	SOIL LAB	Laboratory Trolley	2	USET/ACE IMPACT/1373/2025	
#45	SOIL LAB	Particle Size Sedimentation ZI 3010 (Hydrometer Method)	6	USET/ACE IMPACT/1374/2025	

#46	SOIL LAB	Density bottle 25ml	12	USET/ACE IMPACT/1375/2025	
#47	SOIL LAB	Laboratory Vane Shear Apparatus (Motorised)	2	USET/ACE IMPACT/1377/2025	

#48	SOIL LAB	Constant Volume Mould	2	USET/ACE IMPACT/1378/2025	
#49	SOIL LAB	Swell Test Apparatus	2	USET/ACE IMPACT/1379/2025	

#50	SOIL LAB	Unconfined Compression Tester (Motorised)	2	USET/ACE IMPACT/1380/2025	
#51	SOIL LAB	Pore Pressure Apparatus 10 Kq/cm sq	2	USET/ACE IMPACT/1382/2025	

#52	SOIL LAB	Universal Permeability Equipment	2	USET/ACE IMPACT/1383/2025	
#53	SURVEYING LAB	Plane Table Set	4	USET/ACE IMPACT/1384/2025	

#54	SURVEYING LAB	Hand Held Digital Compass	4	USET/ACE IMPACT/1385/2025	
#55	SURVEYING LAB	Digital Theodolite	5	USET/ACE IMPACT/1386/2025	

#56	SURVEYING LAB	Aluminium tripods	10	USET/ACE IMPACT/1388/2025	
#57	SURVEYING LAB	Prism With Pole	10	USET/ACE IMPACT/1389/2025	

#58	SURVEYING LAB	Range Pole	24	USET/ACE IMPACT/1390/2025 
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Laboratory Features (Lot 2)

Electrical and Electronic Engineering Laboratories

1. CONTROL SYSTEM LAB
2. DIDACTIC TRAINING EQUIPMENT
3. DRIVES LAB.
4. EEM LAB
5. ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY
6. ELECTRICAL ELECTRONIC LAB
7. MACHINE & BEE LAB
8. POWER ELECTRONICS LABORATORY
9. Power Systems Lab

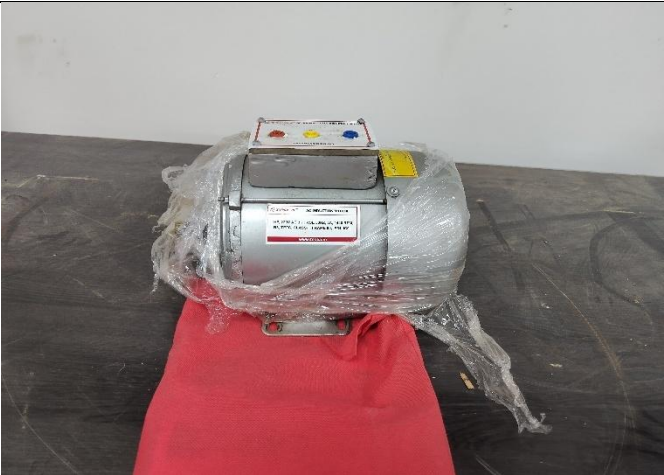
No.	Lab	ITEMS	QTY	TAG NUMBER	PICTURE
#1	CONTROL SYSTEM LAB.	Magnetic Levitation System	2	USET/ACE IMPACT/ 1400/2025	

#2	CONTROL SYSTEM LAB.	Servomotor Control and Instrumentation	1	USET/ACE IMPACT/ 1401/2025	
#3	CONTROL SYSTEM LAB.	Nio Robot	1	USET/ACE IMPACT/ 1402/2025	

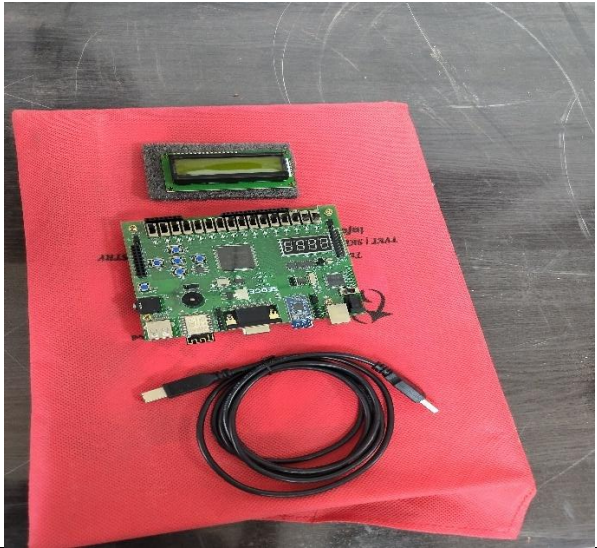
#4	CONTROL SYSTEM LAB.	Nao Robot	1	USET/ACE IMPACT/1403/2025	
#5	DIDACTIC TRAINING EQUIPMENT	MR401E Lamps for Photovoltaic Solar Trainers	1	USET/ACE IMPACT/1404/2025	

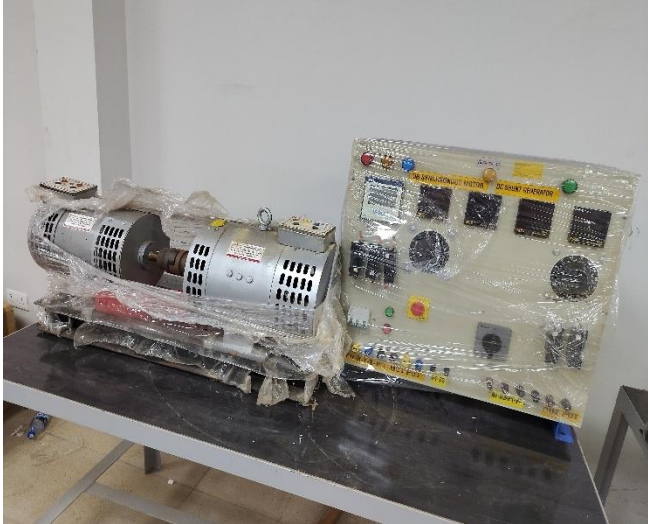
#6	DIDACTIC TRAINING EQUIPMENT	Flat Panel Solar Energy	1	USET/ACE IMPACT/1406/2025	
#7	DIDACTIC TRAINING EQUIPMENT	PLC Vocational Training Equipment Didactic Electrical Automatic Trainer	1	USET/ACE IMPACT/1407/2025	

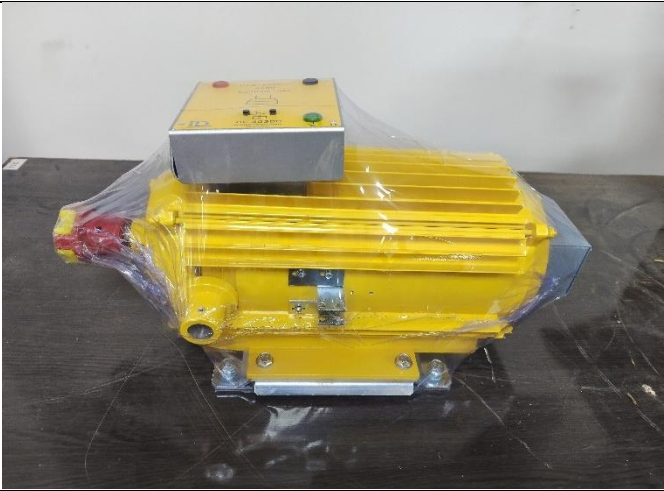
#8	DIDACTIC TRAINING EQUIPMENT	Electronics Training Workbench	1	USET/ACE IMPACT/1409/2025	
#9	DRIVES LAB.	3-Phase IGBT Based PWM Inverter	2	USET/ACE IMPACT/1410/2025	

#10	DRIVES LAB.	AC Machine 3 PHASE – 1HP	1	USET/ACE IMPACT/1411/2025	
#11	DRIVES LAB.	AC Machine 3 PHASE – 3HP	1	USET/ACE IMPACT/1412/2025	

#12	DRIVES LAB.	DC Machine – 1HP	1	USET/ACE IMPACT/1413/2025	
#13	DRIVES LAB.	DC Machine – 3HP	1	USET/ACE IMPACT/1414/2025	

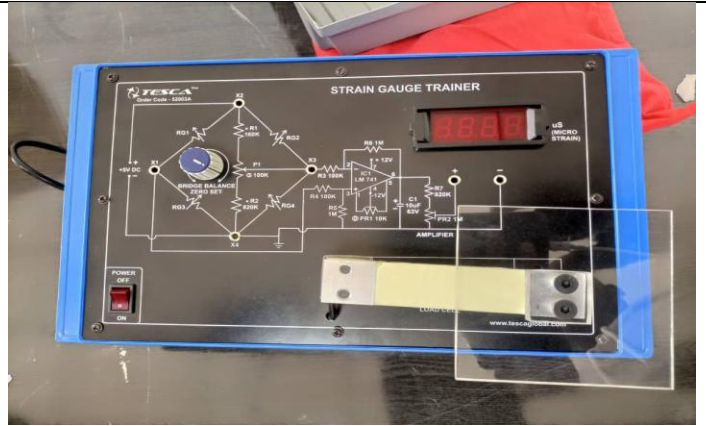
#14	DRIVES LAB.	Primer Spartan 3 Development Kit with interface card	5	USET/ACE IMPACT/1415/2025	
#15	DRIVES LAB.	Universal Development Board with interface card	5	USET/ACE IMPACT/1416/2025	
#16	DRIVES LAB.	AD 0809 Interface Card	4	USET/ACE IMPACT/1417/2025	

#17	DRIVES LAB.	FPGA Based Speed Control of BLDC Drive	2	USET/ACE IMPACT/1418/2025	
#18	DRIVES LAB.	Speed Control Synchronous (PMSM) Motor Coupled with DC Generator setup	2	USET/ACE IMPACT/1419/2025	

#19	DRIVES LAB.	Speed Control of 3 Phase Wound Rotor Induction Motor with DC Generator setup	2	USET/ACE IMPACT/1420/2025	
#20	EEM LAB	3phase Auto Transformer	1	USET/ACE IMPACT/1421/2025	

#21	EEM LAB	3phase Resistive Load Box	1	USET/ACE IMPACT/1422/2025	
#22	EEM LAB	Measurement of Displacement using LVDT	1	USET/ACE IMPACT/1423/2025	

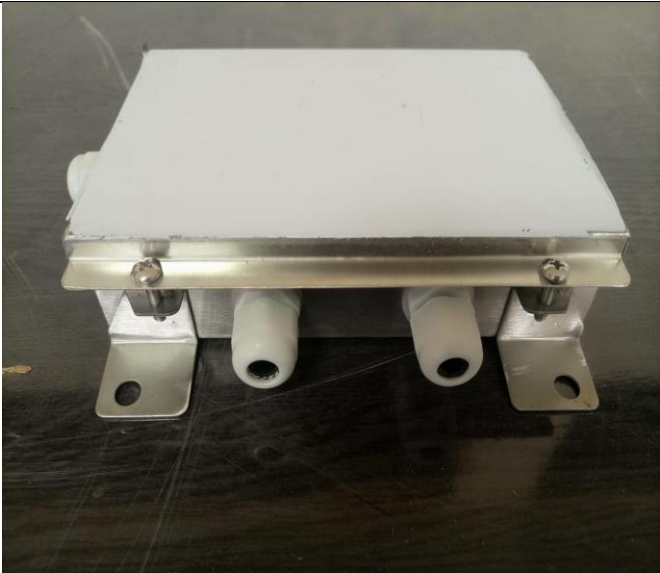
#23	EEM LAB	Measurement & control of Temp. Using Thermocouple	1	USET/ACE IMPACT/1424/2025	
#24	EEM LAB	Torque measurement Trainer	1	USET/ACE IMPACT/1425/2025	

#25	EEM LAB	Measurement of Strain using Strain Gauge	1	USET/ACE IMPACT/1426/2025	
#26	EEM LAB	Pressure Measurement Module	1	USET/ACE IMPACT/1427/2025	

#27	EEM LAB	Capacitive Pickup trainer	5	USET/ACE IMPACT/1428/2025	 A red MCP M21-7100 Analogue & Digital Training System. It features a central breadboard, a DC power supply, a potentiometer, a function generator, and various input/output ports. A bundle of colorful wires is connected to the right side of the unit.
#28	EEM LAB	Regulated DC power Supply	2	USET/ACE IMPACT/1429/2025	 A white regulated DC power supply with a digital display and control knobs. It has a clear plastic cover on the left side and several output terminals at the bottom. A power cord and a USB cable are connected to the back.

#29	EEM LAB	Schering Bridge	2	USET/ACE IMPACT/1430/2025	
#30	EEM LAB	Kelvin's Double Bridge	2	USET/ACE IMPACT/1431/2025	

#31	EEM LAB	Anderson Bridge For self-inductance	2	USET/ACE IMPACT/1432/2025	 The image shows a blue Anderson Bridge circuit board. It features a central bridge diagram with nodes A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z. The board includes a 'ONE-WAVE OSC. 100V' output section, an 'AMPLITUDE CONTROL' knob, a 'SPEAKER (8Ω)' section, a 'POWER' switch, a 'ZERO' knob, and a 'DETECT' section. The board is labeled 'TESCA' and 'Anderson Bridge'.
#32	EEM LAB	Decade capacitive box	2	USET/ACE IMPACT/1433/2025	 The image shows a white Decade Capacitor Box, Model J01429. It has five rotary switches for setting capacitance values: x10nF, x100nF, x1μF, x100pF, and x1nF. Each switch has a scale from 1 to 9. The box has two terminals labeled A and B. It is labeled 'MODEL J01429 CAPACITOR BOX' and 'CAPACITANCE'.

#33	EEM LAB	Portable Wheatstone bridge	2	USET/ACE IMPACT/1434/2025	
#34	EEM LAB	Deflection galvanometer	2	USET/ACE IMPACT/1435/2025	

#35	EEM LAB	Spectrum analyzer	1	USET/ACE IMPACT/1436/2025	
#36	EEM LAB	Synchro scope	1	USET/ACE IMPACT/1437/2025	

#37	EEM LAB	Auto Transformer	1	USET/ACE IMPACT/1438/2025	
#38	ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY	LVDT Kit	5	USET/ACE IMPACT/1440/2025	

#39	ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY	Photo Transducers Kit	5	USET/ACE IMPACT/1442/2025	 The image shows a blue rectangular device labeled 'TESCA™ Ultrasonic Digital Distance Trainer'. It features a green LCD display, a 'POWER OFF' switch, and various input/output ports. A black power cable with a standard three-prong plug is connected to the bottom of the unit.
#40	ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY	Optical Transducer Kit	5	USET/ACE IMPACT/1443/2025	 The image shows a blue rectangular device labeled 'TESCA™ Temperature Transducers Trainer'. It has a complex panel with multiple input/output ports, a green potentiometer, a 'POWER OFF' switch, and a digital display. A black power cable with a standard three-prong plug is connected to the bottom of the unit.

#41	ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY	CRO Trainer	5	USET/ACE IMPACT/1444/2025	
#42	ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY	LCR Q Meter 4910 (APLAB)	2	USET/ACE IMPACT/1446/2025	

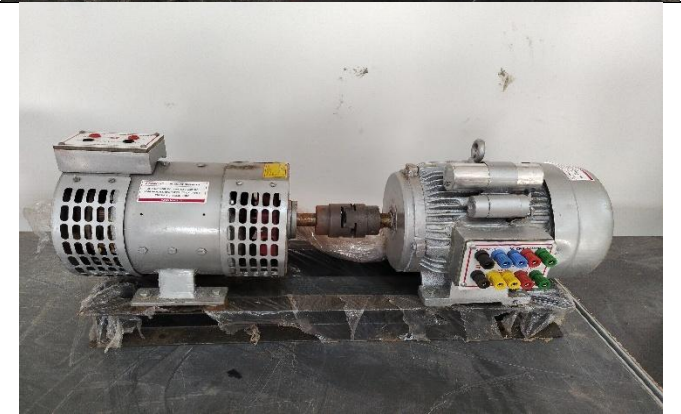
#43	ELECTRICAL MEASUREMENT & INSTRUMENTATION LABORATORY	Digital Gauge Meter	2	USET/ACE IMPACT/1447/2025	
#44	ELECTRICAL/ELECTRONIC	Three Phase Induction Motor	2	USET/ACE IMPACT/1450/2025	

#45	ELECTRICAL/ELECTRONIC	Three Phase Transformer	2	USET/ACE IMPACT/1451/2025	
#46	ELECTRICAL/ELECTRONIC	Single Phase Transformer	1	USET/ACE IMPACT/1452/2025	

#47	ELECTRICAL/ELECTRONIC	Single Phase Transformer	1	USET/ACE IMPACT/1453/2025	
#48	ELECTRICAL/ELECTRONIC	DC Motor – 1HP	2	USET/ACE IMPACT/1454/2025	

#49	ELECTRICAL/ELECTRONIC	DC Motor – 3HP	2	USET/ACE IMPACT/1455/2025	
#50	ELECTRICAL/ELECTRONIC	DC Motor & Generator Set	2	USET/ACE IMPACT/1456/2025	

#51	ELECTRICAL/ELECTRONIC	Charger and DC Generator Set	1	USET/ACE IMPACT/1458/2025	
#52	ELECTRICAL/ELECTRONIC	Three Phase Induction Motor and DC Generator Set	1	USET/ACE IMPACT/1459/2025	

#53	ELECTRICAL/ELECTRONIC	DC Motor and single-Phase Alternator	2	USET/ACE IMPACT/1460/2025	
#54	ELECTRICAL/ELECTRONIC	DC Motor and 3 Phase Alternator	2	USET/ACE IMPACT/1461/2025	

#55	ELECTRICAL/ELECTRONIC	Regulated DC power supply	5	USET/ACE IMPACT/1462/2025	
#56	MACHINE & BEE LAB	Main AC Incoming Panel	1	USET/ACE IMPACT/1463/2025	

#57	MACHINE & BEE LAB	AC Distribution Panel	1	USET/ACE IMPACT/1464/2025	
#58	MACHINE & BEE LAB	Current Transformer	1	USET/ACE IMPACT/1465/2025	

#59	MACHINE & BEE LAB	Potential Transformer	1	USET/ACE IMPACT/1466/2025	
#60	MACHINE & BEE LAB	Resistance Temperature Display	1	USET/ACE IMPACT/1467/2025	

#61	MACHINE & BEE LAB	AC AMMETER	5	USET/ACE IMPACT/1468/2025	
#62	MACHINE & BEE LAB	AC VOLTMETER	5	USET/ACE IMPACT/1469/2025	

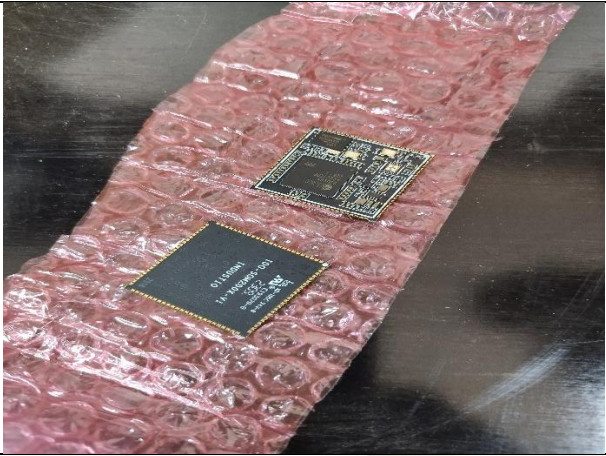
#63	MACHINE & BEE LAB	AC VOLTMETER	5	USET/ACE IMPACT/1470/2025	 A yellow, trapezoidal-shaped AC voltmeter with a black face. It features a large circular scale with markings at 200, 400, and 600. The needle is positioned near 0. To the left of the scale is a small circular window with a 'V' inside. Above the scale, it says 'AC/DC'. The top right corner has the model number 'DL 2109T1PV' and 'MOVING IRON VOLTMETER'. There are two input terminals on the left and a green ground terminal at the bottom.
#64	MACHINE & BEE LAB	WATTMETER	5	USET/ACE IMPACT/1471/2025	 A yellow, trapezoidal-shaped power meter with a black face. It features a large digital display in the center. Below the display is a red button labeled 'FUNCTION'. To the left of the display are two input terminals labeled 'IN' with '+' and '-' signs. To the right are two output terminals labeled 'OUT' with '+' and '-' signs. Below the display, there are several mathematical formulas: $V = \sqrt{\frac{3VI}{n}}$, $P = \sqrt{\frac{3VI \cdot I}{n}}$, $S = VI$, $I = \sqrt{\frac{3I}{n}}$, and $Q = \sqrt{\frac{3I \cdot P}{n}}$. There is also a red switch labeled 'POWER OFF' and a green ground terminal at the bottom.

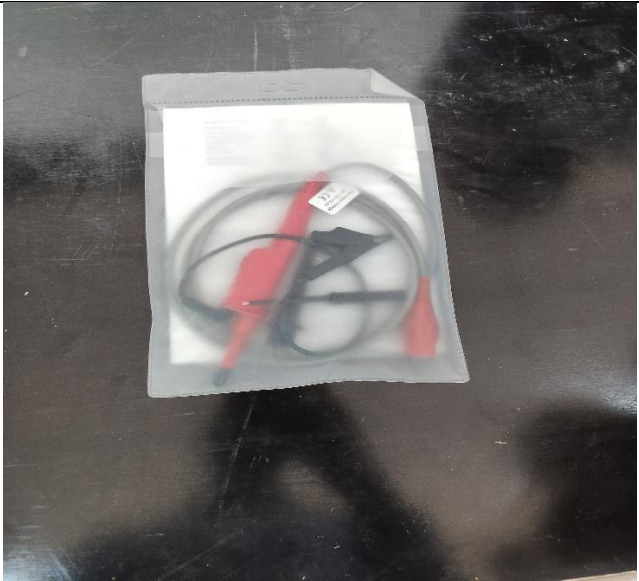
#64	MACHINE & BEE LAB	WATTMETER	5	USET/ACE IMPACT/1472/2025	
#65	MACHINE & BEE LAB	WATTMETER	5	USET/ACE IMPACT/1473/2025	

#66	MACHINE & BEE LAB	ENERGYMETER 1 phase two wire,	2	USET/ACE IMPACT/1474/2025	
#67	MACHINE & BEE LAB	MULTIMETER— CMR	2	USET/ACE IMPACT/1475/2025	

#68	POWER ELECTRONICS LABORATORY	High Voltage ProHigh Power 220V Single Phase Automatic Power Voltage Regulator:	5	USET/ACE IMPACT/1476/2025	
#69	POWER ELECTRONICS LABORATORY	Current probe 100A ac/dc; Tektronix	5	USET/ACE IMPACT/1477/2025	

#70	POWER ELECTRONICS LABORATORY	Digital Power Meter; WT 230	2	USET/ACE IMPACT/1478/2025	
#71	POWER ELECTRONICS LABORATORY	Agilent DSO 100MH 2 Chanel Oscilloscope	1	USET/ACE IMPACT/1479/2025	

#72	POWER ELECTRONICS LABORATORY	JTAG Emulator for Interfacing the DSP, XDSS510PP	2	USET/ACE IMPACT/1481/2025	
#73	POWER ELECTRONICS LABORATORY	Three Phase Power Quality Analyzer, Fluke 434	1	USET/ACE IMPACT/1482/2025	

#74	POWER ELECTRONICS LABORATORY	Passive Current probe Tektronix	5	USET/ACE IMPACT/1484/2025	
#75	POWER SYSTEM LABORATORY	AC Generator protection Panel, equip/08/06-07	1	USET/ACE IMPACT/1486/2025	

#76	POWER SYSTEM LABORATORY	Relay Testing kit	2	USET/ACE IMPACT/1487/2025	
#77	POWER SYSTEM LABORATORY	Static Var Compensator	1	USET/ACE IMPACT/1488/2025	

#78	POWER SYSTEM LABORATORY	Artificial Transmission Line A B C D	1	USET/ACE IMPACT/1489/2025	 A black rectangular device labeled 'ELECTRICAL TRANSMISSION LINE TRAINER'. It features a complex circuit board with numerous red and black terminals, switches, and two small digital displays at the top. The device is partially covered by a clear plastic protective bag.
#79	POWER SYSTEM LABORATORY	DC network analyser, equip/61/04-05 & determination of ABCD parameter,	1	USET/ACE IMPACT/1490/2025	 A blue, upright electronic device labeled 'DC NETWORK ANALYSER'. It has a small screen at the top, several buttons, and two large black knobs. The device is mounted on a black base with four legs.

#80	POWER SYSTEM LABORATORY	Adaptive power factor controller, // equip/61/04-05	1	USET/ACE IMPACT/1491/2025	
#81	POWER SYSTEM LABORATORY	Numerical Relay	2	USET/ACE IMPACT/1492/2025	

Laboratory Features (Lot 3)

Mechanical engineering Laboratories

1. HEAT & MASS TRANSFER LAB
2. HYDRAULICS & FLUID MECHANICS LAB
3. THERMODYNAMICS LAB
4. REFRIGERATION AND AIRCONDITIONING LAB

No.	Lab	ITEMS	QTY	TAG NUMBER	PICTURE
#1	HEAT & MASS TRANSFER LAB	Composite Walls Apparatus	1	USET/ACE IMPACT/1500/2025	

#2	HEAT & MASS TRANSFER LAB	Lagged Pipe Apparatus	1	USET/ACE IMPACT/1501/2025	
#3	HEAT & MASS TRANSFER LAB	Heat Pipe Apparatus	1	USET/ACE IMPACT/1502/2025	

#4	HEAT & MASS TRANSFER LAB	Natural Convection Apparatus	1	USET/ACE IMPACT/1503/2025	
#5	HEAT & MASS TRANSFER LAB	Forced Convection Apparatus	1	USET/ACE IMPACT/1504/2025	

#6	HEAT & MASS TRANSFER LAB	Heat Transfer in Agitated Vessel	1	USET/ACE IMPACT/1505/2025	
#7	HEAT & MASS TRANSFER LAB	Stefan Boltzmanns Apparatus	1	USET/ACE IMPACT/1506/2025	

#8	HEAT & MASS TRANSFER LAB	Critical Heat Flux Apparatus	1	USET/ACE IMPACT/1507/2025	
#9	HEAT & MASS TRANSFER LAB	Shell & Tube Heat Exchanger (Water to Water)	1	USET/ACE IMPACT/1508/2025	

#10	HEAT & MASS TRANSFER LAB	Plate Type Heat Exchanger Apparatus	1	USET/ACE IMPACT/1509/2025	 The image shows a laboratory apparatus for heat transfer experiments. It consists of a metal frame supporting a plate-type heat exchanger. A control panel on the right side features a digital display and several buttons. The panel is labeled 'HEAT EXCHANGER SETUP' and 'PLATE TYPE HEAT EXCHANGER'. The entire unit is wrapped in clear plastic for protection.
#11	HEAT & MASS TRANSFER LAB	Thermal Conductivity of Metal Rod	1	USET/ACE IMPACT/1510/2025	 The image shows a laboratory apparatus for measuring the thermal conductivity of a metal rod. It features a control panel with a digital display, a 'TEMP INDICATOR', a 'TEMP SELECTOR', and a 'HEATER' button. The panel is labeled 'THERMAL CONDUCTIVITY OF METAL ROD'. The entire unit is wrapped in clear plastic for protection.

#12	HEAT & MASS TRANSFER LAB	Thermal Conductivity of Insulating Powder	1	USET/ACE IMPACT/1511/2025	
#13	HYDRAULI CS & FLUID MECHANIC S LAB	Air Compressor Test Rig	1	USET/ACE IMPACT/1512/2025	

#14	HYDRAULICS & FLUID MECHANICS LAB	Reynold's Apparatus	1	USET/ACE IMPACT/1514/2025	
#15	HYDRAULICS & FLUID MECHANICS LAB	Centrifugal Blower Test Rig	1	USET/ACE IMPACT/1516/2025	

#16	HYDRAULICS & FLUID MECHANICS LAB	Mechanical Heat Pump Trainer	1	USET/ACE IMPACT/1519/2025	 A photograph of a mechanical heat pump test rig. The unit is white with a control panel at the top featuring several digital displays, analog gauges, and red emergency stop buttons. Below the panel are two large, square, stainless steel heat exchanger tanks. A network of red and black pipes connects these tanks to a central black cylindrical component, likely the heat pump compressor or condenser. The entire setup is protected by clear plastic wrap.
#17	HYDRAULICS & FLUID MECHANICS LAB	Water Cooling Tower Apparatus	1	USET/ACE IMPACT/1520/2025	 A photograph of a water cooling tower apparatus. It features a control panel with two digital readouts and several red push buttons. Below the panel is a large, rectangular, metallic structure, possibly the cooling tower fan or motor assembly. The unit is surrounded by protective bubble wrap. In the foreground, there is a white label with text including 'CONSIGNOR AL...', 'GRADCO', and 'PLACE OF DELIVERY: 2'.

#18	HYDRAULICS & FLUID MECHANICS LAB	Flow Measurement by Venturi meter & Orifice meter Apparatus	1	USET/ACE IMPACT/1522/2025	
#19	HYDRAULICS & FLUID MECHANICS LAB	Separating & Throttling Calorimeter with Boiler	1	USET/ACE IMPACT/1523/2025	

#20	HYDRAULICS & FLUID MECHANICS LAB	Hydraulic Trainer Electrohydraulic	1	USET/ACE IMPACT/1524/2025	 The image shows the control panel of an electro-hydraulic trainer. It features several sections: 'LIMIT SWITCH OPERATION' with 'START' (red) and 'STOP' (green) buttons and 'SUPPLY' terminals; a 'SELECT' switch; 'MANUAL OPERATION' with 'S1' and 'S2' solenoid controls; a 'POWER PACK' with 'START' (red) and 'STOP' (green) buttons; and a 'MAIN' power switch. The panel is labeled 'ELECTRO-HYDRAULIC TRAINER CONTROL PANEL' and 'MASS INTERNATIONAL'.
#21	HYDRAULICS & FLUID MECHANICS LAB	Losses in Pipe Fittings	1	USET/ACE IMPACT/1525/2025	 The image shows a wooden crate wrapped in bubble wrap, with a label that reads 'LOSSES IN PIPE FITTINGS'.

#22	HYDRAULICS & FLUID MECHANICS LAB	Refrigerant Charging Unit	1	USET/ACE IMPACT/1526/2025	
#23	HYDRAULICS & FLUID MECHANICS LAB	Losses in Pipe Friction	1	USET/ACE IMPACT/1527/2025	

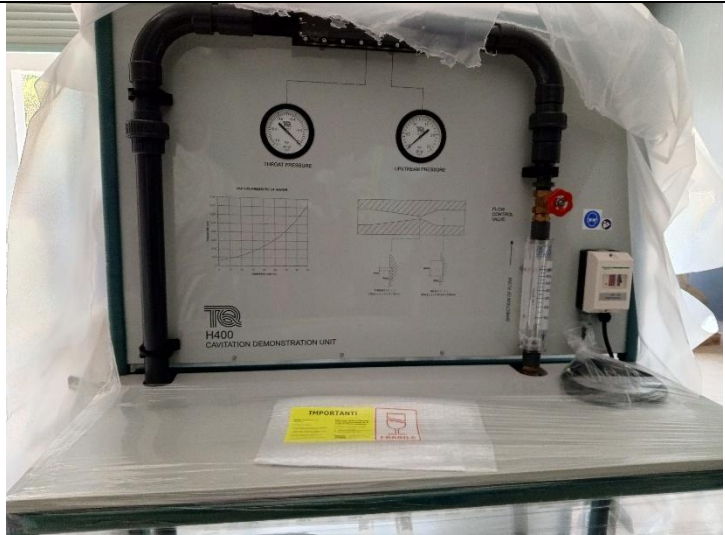
#24	HYDRAULICS & FLUID MECHANICS LAB	Radiant transfer Experiment (TD1003)	1	USET/ACE IMPACT/1528/2025	
#25	HYDRAULICS & FLUID MECHANICS LAB	Free & Forced Vortex Apparatus	1	USET/ACE IMPACT/1531/2025	

#26	HYDRAULICS & FLUID MECHANICS LAB	Heat Transfer Experiment	1	USET/ACE IMPACT/1532/2025	
#27	HYDRAULICS & FLUID MECHANICS LAB	Open Channel Apparatus	1	USET/ACE IMPACT/1534/2025	

#28	HYDRAULICS & FLUID MECHANICS LAB	Radial Heat Conduction	1	USET/ACE IMPACT/1535/2025	
#29	HYDRAULICS & FLUID MECHANICS LAB	Francis Turbine Test Setup -	1	USET/ACE IMPACT/1537/2025	

#30	HYDRAULICS & FLUID MECHANICS LAB	Multistage Centrifugal Pump Test Rig	1	USET/ACE IMPACT/1540/2025	
#31	HYDRAULICS & FLUID MECHANICS LAB	Gear Pump Test Rig	1	USET/ACE IMPACT/1541/2025	

#32	HYDRAULICS & FLUID MECHANICS LAB	Centre of Pressure	1	USET/ACE IMPACT/1545/2025	
#32	HYDRAULICS & FLUID MECHANICS LAB	Pressure Measurement Bench	1	USET/ACE IMPACT/1547/2025	

#33	HYDRAULICS & FLUID MECHANICS LAB	Cavitation demonstration Unit with Stroboscope (ST1)	1	USET/ACE IMPACT/1550/2025	
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