## **POLITE Tech Resources**

## **Key Equipment List**

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Equipment Name	Description / What is it / What are the applications?	Quantity (if applicable)	Condition	Location	Contact Person / Office	Remarks / Other Related Equipment
Scanning Electron Microscope/EDX	Morphology analysis			39-01-007C	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Fouling evaluation system	Fouling potential analysis			40-01-001C	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Porometer	Pore size analysis			40-01-001D	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Gel Permeation Chromotograph (GPC)	Molecular Weight Cut-off analysis			40-01-001D	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Zeta Potential Analyser	Surface charge analysis			40-01-001D	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Lab UF module testing systems	Membrane permeability analysis			40-01-001C	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Pilot Scale Electrospinning System	Nano fibre spinning for scale up productions			40-01-01A	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Automated Filter media Test system - IAQ	To test air filter media and face masks using aerosols, in compliance with international standards			40-01-01A	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
(CPC) for Scanning Mobility	To detect and count particles in room air and outdoor accurately to 4nm size			40-01-01A	Maung Tin Win/Cfes	EQUIPMENT UNDER SSP SERVICE
Ammonia Distillation System	Ammonia Nitrogen analysis in water			39-01-007G	Maung Tin Win/Cfes	WATER QUALITY
Gas Chromatograph (GC-FID/TCD)	Organic compound (volatile, semi-volatile) by direct (liquid injection)			39-01-007E	Maung Tin Win/Cfes	WATER QUALITY
HACH Lab turbidity meter	Turbidity			39-01-007G	Maung Tin Win/Cfes	WATER QUALITY
Inductively Coupled Plasma (ICP-OES)	Metals analysis			39-01-007E	Maung Tin Win/Cfes	WATER QUALITY
lon Chromatography (IC) System	Anions analysis (F, Cl, Br, NO2, NO3, PO4, SO4)			39-01-007E	Maung Tin Win/Cfes	WATER QUALITY
Silt Density Index Apparatus	Silt Density Index			39-01-007E	Maung Tin Win/Cfes	WATER QUALITY
Total Organic Carbon (TOC) Analyser	TOC (TC-IC)			39-01-007E	Maung Tin Win/Cfes	WATER QUALITY
Spectrophotometer (UV-Vis), Liquid	Multi-parameters analysis in water			39-01-007E	Maung Tin Win/Cfes	WATER QUALITY
Portable and Rugged Infrared A Infrared Oil Analyzer	O&G analysis			40-01-001D	Maung Tin Win/Cfes	WATER QUALITY
Spectrophotometer with Merck reagents	TOC, PO4, SO4, NO2, NO3, Chlorine (Free, Total), Ozone, Color, etc.,			39-01-007G	Maung Tin Win/Cfes	WATER QUALITY
Autoclave	Sterilization in Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Bioluminescent bacteria	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY

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Biosafety Cabinet (BSC Level II)	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Gel electrophoresis	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Incubator 30-700C	Incubation in Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Laminar Flow Cabinet	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
(Motorized Microscope	Microbiology analysis			39-01-007C	Maung Tin Win/Cfes	MICROBIOLOGY
Polymerase chain reactor	Amplifying segments of DNA			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Microscope, Microbiology System	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Microscope, Stereo zoom System	Microbiology analysis			39-01-007C	Maung Tin Win/Cfes	MICROBIOLOGY
Shaking Incubator (Bench Top Type)	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Shaking Incubator (Floor Standing Type)	Microbiology analysis			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Ultra-Low Freezer	Storage under -80oC			39-01-007H	Maung Tin Win/Cfes	MICROBIOLOGY
Glass Reactor System for Corrosive Reactions	Pilot-scale chemical/ polymer synthesis			40-01-01F	Maung Tin Win/Cfes	MATERIAL PROCESSING
Electrostatic Sprayer (Portable)	Surface coating application (Spraying)			39-01-007E	Maung Tin Win/Cfes	MATERIAL PROCESSING
Multiple Dip Coater	Surface coating application (Dipping)			39-01-007F	Maung Tin Win/Cfes	MATERIAL PROCESSING
Ultrasonic Processor	Industrial probe type homogenizer			39-01-007F	Maung Tin Win/Cfes	MATERIAL PROCESSING
Hydraulic Press	Materials application			39-01-0071	Maung Tin Win/Cfes	MATERIAL PROCESSING
Pelletiser	Granular application			39-01-0071	Maung Tin Win/Cfes	MATERIAL PROCESSING
Planetary Mixer	Materials application			39-01-0071	Maung Tin Win/Cfes	MATERIAL PROCESSING
Microwave Digestion System	Preparation for metal analysis			39-01-007G	Maung Tin Win/Cfes	MATERIAL PROCESSING
Rotary Evaporator	Concentration and separation by distillation			39-01-007G	Maung Tin Win/Cfes	MATERIAL PROCESSING
Soxhlet Extraction System	Oil & Grease measurement, Extraction			39-01-007G	Maung Tin Win/Cfes	MATERIAL PROCESSING
Furnace (Bench Type with Large Chamber)	Heating up to 11000C with N2 purging system			39-01-0071	Maung Tin Win/Cfes	MATERIAL PROCESSING
Furnace (Bench Type with Large Chamber)	Heating up to 11000C			39-01-0071	Maung Tin Win/Cfes	MATERIAL PROCESSING
Furnace (Bench Type with Small Chamber)	Heating up to 5500C			39-01-0007	Maung Tin Win/Cfes	MATERIAL PROCESSING

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High Temperature Multiple Zone	High temperature treatment in different zone			39-01-0071	Maung Tin Win/Cfes	MATERIAL PROCESSING
Shaking water bath	Heating up to 1000C			39-01-007H	Maung Tin Win/Cfes	MATERIAL PROCESSING
Water Bath	Heating up to 1000C			39-01-007G	Maung Tin Win/Cfes	MATERIAL PROCESSING
Oven	Heating up to 3000C			39-01-007I	Maung Tin Win/Cfes	MATERIAL PROCESSING
Ionic Conductivity Meter	Electrochemical impedance spectroscopy; ionic conductivity, redox potentials, kinetic rate constants			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Melt Flow Index Tester	Melt flow measurement for thermoplastic samples			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Moisture analyser	Moisture content measurement			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Oxygen Bomb Calorimeter (Calorimeter)	Heat/calorific value			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Particle Sizer (Laser diffraction analyser)	Particle size distribution analysis			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Portable Flocculator Tester	Experimental set up			39-01-007G	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Pycnometer [Quanta chrome]	Porosity measurement			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Raman Microscope spectrometer	Material characterization analysis (nonpolar material)			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Spectrophotometer (UV-Vis), Solid	Spectrophotometer analysis for solid samples			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Thermal Analysing System (TGA & TMA)	Thermal properties of material (weight & dimension)			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Thin-Film coating Measurement	Thin-Film Thickness measurement			39-01-007E	Maung Tin Win/Cfes	MATERIAL ANALYSIS
Rotational viscometer (Fungila)	Measure viscosity for polymer drop			40-01-001G	Maung Tin Win/Cfes	MEMBRANE FABRICATION
Hollow Fiber Spinning Machine	NIPS			40-01-001G	Maung Tin Win/Cfes	MEMBRANE FABRICATION
Lab Scale Thin Film Applicator	Flat sheet casting system (small scale)			40-01-001G	Maung Tin Win/Cfes	MEMBRANE FABRICATION
Freeze Drier	Membrane drying			40-01-001B	Maung Tin Win/Cfes	MEMBRANE FABRICATION
High Magnification Lens	For Morphology study			40-01-001G	Maung Tin Win/Cfes	MEMBRANE FABRICATION
Microscope	For Morphology study			40-01-001G	Maung Tin Win/Cfes	MEMBRANE FABRICATION
Contact Angle Measurement (flat sheet)	Contact angle for flat sheet			40-01-001D	Maung Tin Win/Cfes	MEMBRANE CHARACTERISATION
Hollow fibre surface analyser	Contact angle for hollow fibre			40-01-001D	Maung Tin Win/Cfes	MEMBRANE CHARACTERISATION
Fourier transform infrared spectroscopy (FTIR)	Analysis of Chemical functional groups & identify compounds			40-01-001D	Maung Tin Win/Cfes	MEMBRANE CHARACTERISATION

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Upgrading Tensile machine 3366	Measure tensile strength of materials			40-01-001D	Maung Tin Win/Cfes	MEMBRANE CHARACTERISATION
Ultrasonic bath	Degassing of solution, dispersion of suspension. Heating up to 900C			40-01-001B	Maung Tin Win/Cfes	MEMBRANE CHARACTERISATION
Vertical potting machine	Mechanical system for module potting			40-01-001B	Maung Tin Win/Cfes	MEMBRANE MODULE DEVELOPMENT
Centrifugal Potting System	Mechanical system for module potting			40-01-001B	Maung Tin Win/Cfes	MEMBRANE MODULE DEVELOPMENT
Module cutting machine	Mechanical system for module cutting			40-01-001B	Maung Tin Win/Cfes	MEMBRANE MODULE DEVELOPMENT
Tangential Flow Filtration System	Experimental set up for water and wastewater treatment			39-01-0007	Maung Tin Win/Cfes	MODULE TESTING
(to include next year as we	High-pressure filtration, such as NF and RO			40-01-01F	Maung Tin Win/Cfes	MODULE TESTING
Vertical CNC Machine	Machining of fabrication parts			39-01-0008	Maung Tin Win/Cfes	PROTOTYPING

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