National Center for
Composite Materials

Mechanical Testing Lab

Lab Facilities

NTU
INNOVATE AND LEAD

www.ntu.edu.pk/nccm

Mechanical Characterisation Lab

Universal Testing Machine

Fatigue Testing Machine

Melt Flow Indexer

Pendulum Impact Tester

Drop Weight Impact Tester

Hardness Tester (Shore A and Barcol)

Universal Testing Machine

UTM Z100 Allroundline, Zwick-Germany

(With temperature chamber)

Tensile	UD and woven Composites
	Dry fabrics
Flexural	3 Point flexural
	4 Point flexural
Compression	End loading compression
	Compression after impact
Shear	V-notch rail shear
	Short Beam Shear
Fracture mechanics	Energy for fracture
Peel tests	T-Peel test (180° peel test)
	Floating roller peel test

Fatigue Testing Machine

HC 25, Zwick-Germany

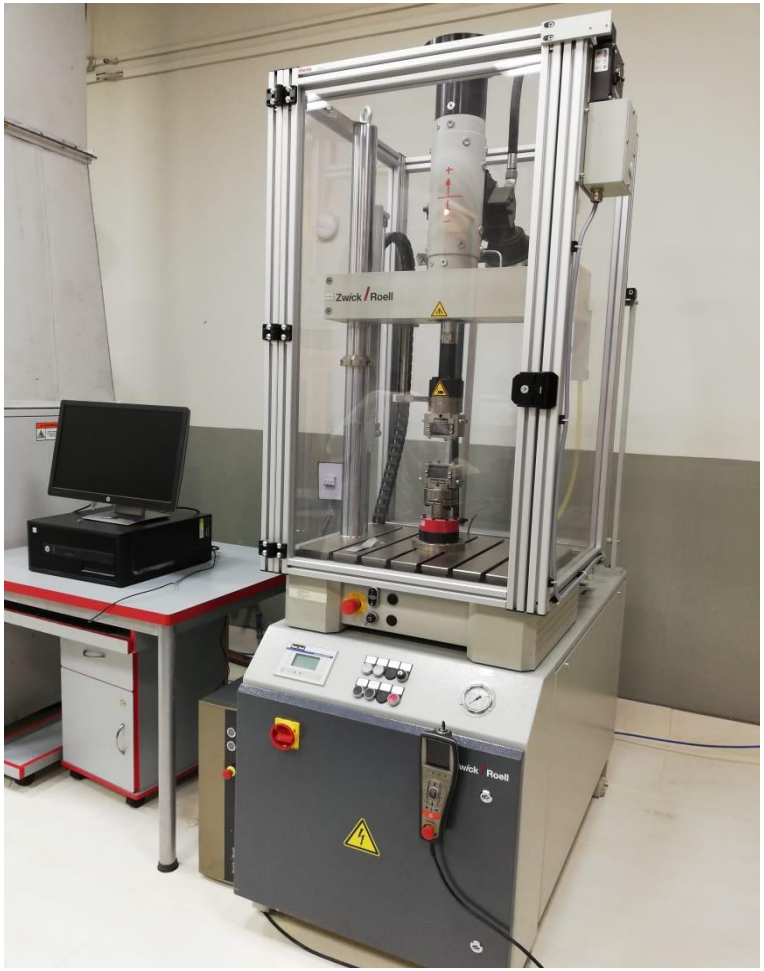
Dynamic testing of specimen in two different modes:

Tensile

UD and woven Composites

Flexural

3 Point flexural (UD and woven Composites)



Pendulum Impact Tester

HIT 50P, Zwick-Germany

To investigate the impact behaviour of composite materials by falling pendulum in two different modes:

Charpy (ISO 179)

Notched and un-notched composites

Izod (ISO 180)

Notched and un-notched composites

Manual notch maker, according to the ISO 179 and ISO 180.

Drop weight Impact Tester

HIT 230F, Zwick-Germany

To investigate the impact behaviour of composite materials by freely falling dead weight.

Test specimen

Dimensions: 100 mm × 150 mm

Test method

ASTM D7136

Melt Flow Indexer

BMF-001.02, Zwick-Germany

To determine the Melt Mass Flow Rate (MFR) and Melt Volume Flow Rate (MVR) of unfilled thermoplastics

Test method

ISO 1133

ASTM D1238

Hardness Testers

Shore A Hardness Tester, Zwick-Germany

To determine the hardness of soft materials usually rubber or plastics

Test Method

ASTM D2240

Barcol Hardness Tester, Zwick-Germany

To determine the hardness of soft materials such as rigid plastics

Test method

ASTM D2583