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**ARID AGRICULTURE UNIVERSITY RAWALPINDI**  
**FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY**

**List of Instruments**

**Department of Energy Systems Engineering**

<b>Sr. #</b>	<b>Name of Instrument</b>	<b>Model/Manufacturer</b>
<b>Engineering Thermodynamics</b>		
<b>1</b>	Refrigeration cycle demonstration unit	IRC-1901/EES
<b>2</b>	Thermocouple trainer	E-4576/EES
<b>3</b>	Pressure measuring bench	TH-3197/EES
<b>4</b>	Air operated impulse turbine	TH-5656/EES
<b>6</b>	Temperature measuring bench	ET-7676/EES
<b>7</b>	Process control trainer	IT-5200/EES
<b>8</b>	Fluidization and fluid bed heat transfer unit	Th-556/EES
<b>10</b>	Nozzle pressure distribution	TH-3197/ESE
<b>11</b>	Temperature and humidity chamber	TH-3132/EES
<b>Renewable Energy Lab</b>		
<b>1</b>	Mechanical Equivalent of heat apparatus	TH-3272/EES
<b>2</b>	Radiation heat transfer unit	TH-878/ESE
<b>4</b>	Thermal solar energy basic unit	TH-3281/EES
<b>Bio-Energy Lab</b>		
<b>1</b>	Biogas Process Unit	TH-3285/EES Remarks: Working, pH sensor & hot water pump is not working
<b>2</b>	Bioethanol Process Unit	TH-3284/EES
<b>3</b>	Biodiesel Process Unit	TH-3286/EES
<b>5</b>	Hot Plate	-
<b>6</b>	Centrifuge	-
<b>Biogas Workstation</b>		
<b>1</b>	Biogas Analyzer	-
<b>3</b>	Portable biogas digestors	-
<b>Solar Energy Lab</b>		
<b>1</b>	Director Solar Dryer	-
<b>4</b>	Shefler reflector	-