



## MANIPAL UNIVERSITY JAIPUR

School of Electrical, Electronics and  
Communication Engineering  
Department of Electrical Engineering

### ***Lab & Equipment Details (MSS Lab)*** ***Location: 1AB Building, Room No. 204***

Name of Laboratory	Microcontroller & System Simulation Laboratory
Lab Description	Microcontroller is the brain of automation and control. The lab provides a simulation and interface platform with MATLAB, NI- LABVIEW software, Digilent Power-factory installed in 20 well configured computers. The lab is also well equipped with the NI Data acquisition card (DAQ-6009), Microcontroller AT89C52 simulation board with various interfacing modules like LCD interface, ADC & DAC interface, stepper motor interface, DC motor interface, interrupt interface unit, traffic light simulation interface, and lift control interface etc. The lab facilities motivate and attract students to take up and implement innovative and challenging projects using Arduino boards, Raspberry Pi boards, and various sensors.
Lab Resources	<ul style="list-style-type: none"> <li>• Microcontroller Trainer Board Basic ESA MCB 51</li> <li>• Microcontroller Trainer Board Advanced ESA MCB 51 -2</li> <li>• 4- Digit, 7 Segment LED Display Interface (IF DIS)</li> <li>• Elevator Interface (IF ELV)</li> <li>• Stepper Motor Interface with Stepper Motor &amp; Power Adapter(IF STEP)</li> <li>• Traffic Light Interface (IF TRL)</li> <li>• 16 Channel 8-bit ADC Interface (IF 16ADC8)</li> <li>• Dual DAC interface (IF DDAC)</li> <li>• NI - Academic Site License- LabView Teaching Only (Small) Single Seat NOT CONCURRENT 1Year (s) Academic Site License Teaching Standred Service Program</li> <li>• DAC CARD - USB-6009 14-bit, 48kS/s Multifunction I/O and NI-DAQmx Software</li> <li>• Arduino Uno Boards</li> <li>• Arduino Mega Boards</li> <li>• Raspberry Pi-4 development board</li> </ul>