Maulana Abul Kalam Azad University of Technology, West Bengal
Syllabus for B. Tech in Electronics & Communication Engineering
(Applicable from the academic session 2018-2019)

EC493	Microprocessor & Microcontroller Lab	0L:0T:2P	1 credits

1. Familiarization with 8085 & 8051simulator on PC.
2. Study of prewritten programs using basic instruction set (data transfer, Load/Store, Arithmetic, Logical) on the KIT. Assignments based on above
3. **Programming using kit and simulator for:**
   i)   Table look up
   ii)   Copying a block of memory
   iii)   Shifting a block of memory
   iv)   Packing and unpacking of BCD numbers
   v)   Addition of BCD numbers
   vi)   Binary to ASCII conversion
   vii)   String Matching, Multiplication using shift and add method and Booth's Algorithm

4. Program using subroutine calls and IN/OUT instructions using 8255 PPI on the trainer kit e.g. subroutine for delay, reading switch state and glowing LEDs accordingly.
5. Study of timing diagram of an instruction on oscilloscope..
6. Interfacing of 8255: Keyboard and Multi-digit Display with multiplexing using 8255
7. Study of 8051 Micro controller kit and writing programs as mentioned in S/L3. Write programs to interface of Keyboard, DAC and ADC using the kit.
8. Serial communication between two trainer kits