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

Name of the course	MICRO PROCESSOR AND MICRO CONTROLLER LABORATORY
Course Code: PC-EE 692	**Semester: 6th**
Duration: 6 months	**Maximum marks:100**
Teaching Scheme	**Examination scheme:**
Theory: 0 hr/week	**Continuous Internal Assessment:40**
Tutorial: 0 hr/week	**External Assessment: 60**
Practical: 2 hrs/week	
Credit Points:1	

	Laboratory Experiments:
1.	Programs for 16 bit arithmetic operations for 8086 (using various addressing modes)
2.	Program for sorting an array for 8086
3.	Program for searching for a number or character in a string for 8086
4.	Program for String manipulations for 8086
5.	Program for digital clock design using 8086.
6.	Interfacing ADC and DAC to 8086.
7.	Parallel communication between two microprocessors using 8255.
8.	Serial communication between two microprocessor kits using 8251.
9.	Interfacing to 8086 and programming to control stepper motor.
10.	Programming using arithmetic, logical and bit manipulation instructions of 8051
11.	Program and verify Timer/Counter in 8051.

12.	Program and verify interrupt handling in 8051.
13.	UART operation in 8051.
14.	Interfacing LCD to 8051.
15.	Interfacing matrix or keyboard to 8051.
16.	Data transfer from peripheral to memory through DMA controller 8237/8257

Institute may develop experiments based on the theory taught in addition to experiments mentioned.

Course outcome: After completion of this course, the learners will be able to

1. identify appropriate equipment and instruments for the experiment
2. test the instrument for application to the experiment
3. construct circuits with appropriate instruments and safety precautions
4. program 8086 for arithmatic operation, sorting of array, searching for a number in a string and string manipulation
5. interface ADC/DAC, 8255, 8251 to 8086 and LCD, keyboard to 8051
6. program 8051 using arithmatic, logical and bit manipulation instructions of 8051
7. work effectively in a team

Special Remarks: The above-mentioned outcomes are not limited. Institute may redefine outcomes based their program educational objective.