Course code	Course Name	L-T-P-Credits	Year of Introduction
AO334	**AVIONICS AND MICROPROCESSOR LAB**	0-0-3-1	2016

Course Objectives

- To train the students to learn about basic digital electronics circuits
- To practice programming with microprocessors
- To do design and implementation of data buses in avionics

List of experiments

DIGITAL ELECTRONICS

1. Addition/Subtraction of binary numbers.

2. Multiplexer Circuits

3. Demultiplexer Circuits.

4. Encoder Circuits

5. Decoder Circuits.

6. Timer Circuits, Shift Registers, Binary Comparator Circuits.

MICROPROCESSORS

1. Addition and Subtraction of 8-bit and 16-bit numbers.

2. Sorting of Data in Ascending & Descending order.

3. Sum of a given series with and without carry.

4. Greatest in a given series & Multi-byte addition in BCD mode.

5. Interface programming with 4 digit 7 segment Display & Switches & LED's.

6. 16 Channel Analog to Digital Converter & Generation of Ramp, Square, Triangular wave by Digital to Analog Converter.

AVIONICS DATA BUSES

1. Study of Different Avionics Data Buses.

2. MIL-Std – 1553 Data Buses Configuration with Message transfer.

3. MIL-Std – 1553 Remote Terminal Configuration.

Expected outcome

The students will be able to

i. do experiments in the area of digital electronics and avionics

ii. execute microprocessor programming

END SEMESTER EXAM