II B. Tech I Semester

## *SUBJECT: ANALOG AND DIGITAL ELECTRONICS (CS301ES)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Blooms Taxonomy Levels |
|---|---|---|
| CS301ES.1 | Know the characteristics of various components. Know about the logic families and realization of logic Gates | **2** |
| CS301ES.2 | Understand the utilization of components. | **3** |
| CS301ES.3 | Design and analyze small signal amplifier circuits. | **4** |
| CS301ES.4 | Learn Postulates of Boolean algebra and to minimize Combinational functions. | **2** |
| CS301ES.5 | Design and analyze combinational and sequential circuits. | **4** |

## *MAPPING*

| Course Code | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CS301ES.1 | 3 | 2 | 2 | 1 | 1 | 1 | | | 1 | 1 | 2 | 2 | 1 | 1 | |
| CS301ES.2 | 2 | 2 | 2 | | 2 | | 1 | 1 | | | 1 | 2 | | 2 | 1 |
| CS301ES.3 | 2 | 2 | 3 | 2 | | 1 | | | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| CS301ES.4 | 2 | 2 | 2 | 2 | 2 | | | | | 1 | 2 | 2 | | 1 | 2 |
| CS301ES.5 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | | 1 | 1 | 3 | 2 | 1 | 1 | 1 |
| Average | 2.2 | 2.0 | 2.4 | 1.5 | 1.5 | 1.0 | 1.0 | 1.0 | 1.3 | 1.0 | 2.0 | 2.0 | 1.0 | 1.4 | 1.5 |

II B. Tech I Semester

## *SUBJECT: COMPUTER ORIENTED STATISTICAL METHODS (MA303BS)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **MA303BS.1** | Apply the concepts of probability and distributions to some case studies. Apply the concepts of discrete probability distributions. | **3** |
| **MA303BS.2** | Apply the concepts of continuous probability distributions. | **3** |
| **MA303BS.3** | Assess the sampling theory and making inferences. | **5** |
| **MA303BS.4** | Correlate the material of one unit to the material in other units. | **2** |
| **MA303BS.5** | Resolve the potential misconceptions and hazards in each topic of study. | **1** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MA303BS.1** | 3 | 2 | 1 | 2 | 2 | 1 | | | 1 | 2 | 1 | 2 | 1 | 2 | 2 |
| **MA303BS.2** | 3 | 2 | 2 | 2 | 3 | | | | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| **MA303BS.3** | 2 | 2 | 2 | 1 | 3 | 1 | | | 2 | 2 | 1 | 3 | 3 | 2 | 1 |
| **MA303BS.4** | 2 | 2 | 1 | | 1 | | 1 | | 1 | | | | | | |
| **MA303BS.5** | 2 | 2 | 1 | | | 1 | 2 | 1 | | | | | | | 1 |
| **AVERAGE** | **2.4** | **2** | **1.4** | **1.67** | **2.25** | **1** | **1.5** | **1** | **1.5** | **2** | **1** | **2.33** | **1.67** | **2** | **1.25** |

II B. Tech I Semester

## *SUBJECT: OBJECT ORIENTATION PROGRAMMING USING C++ (CS305PC)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS305PC.1** | Identify the difference between structured program and procedure-oriented program | **1** |
| **CS305PC.2** | Develop programs for file handling | **2** |
| **CS305PC.3** | Implementing the concepts of Exceptions Handling in programming, Apply the concepts of inheritance | **3** |
| **CS305PC.4** | Develop applications for a range of problems using object-oriented Programming techniques. | **2** |
| **CS305PC.5** | Encapsulation of data in virtual functions. | **3** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS305PC 1** | 2 | 2 | 2 | 2 | 1 | | 1 | | | 2 | 1 | 3 | 3 | 2 | 1 |
| **CS305PC.2** | 3 | 3 | 3 | 3 | 3 | 1 | | | 2 | 2 | | 3 | 3 | 3 | 1 |
| **CS305PC.3** | 3 | 3 | 3 | 3 | 3 | | | | 3 | 2 | 1 | 3 | 3 | 3 | 1 |
| **CS305PC.4** | 3 | 3 | 3 | 3 | 3 | | | 1 | 3 | 2 | | 3 | 3 | 3 | 1 |
| **CS305PC.5** | 3 | 3 | 3 | 3 | 3 | 1 | | | 2 | 1 | | 3 | 3 | 2 | 1 |
| **AVERAGE** | **2.8** | **2.8** | **2.8** | **2.8** | **2.6** | **1** | **1** | **1** | **2.5** | **1.8** | **1** | **3** | **3** | **2.6** | **1** |

II B. Tech I Semester

## *SUBJECT: DATA STRUCTURES LAB (CS307PC)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS307PC.1** | Develop a program using linear data structures such as array and circular queue | **3** |
| **CS307PC.2** | Develop a program for basic operations of Stack and its applications | **4** |
| **CS307PC.3** | Construct a program using Non-linear data structures and their applications such as trees and graphs | **2** |
| **CS307PC.4** | Construct a program using linear data structures for Linked Lists | **3** |
| **CS307PC.5** | Ability to Implement searching and sorting algorithms | **1** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS307PC.1** | 3 | 3 | 3 | 1 | | 1 | 1 | | 2 | 3 | | 1 | 3 | 2 | 3 |
| **CS307PC.2** | 3 | 3 | 3 | 2 | 2 | | 1 | | 2 | | 2 | 1 | 3 | 3 | 3 |
| **CS307PC.3** | 3 | 3 | 3 | 2 | | 1 | | | 2 | 3 | 3 | 1 | 3 | 3 | 3 |
| **CS307PC.4** | 3 | 2 | 3 | 2 | 2 | | 1 | 1 | 2 | | | 1 | 2 | 3 | 3 |
| **CS307PC.5** | 3 | 2 | 1 | 2 | 2 | 1 | | 1 | 3 | 1 | 1 | 1 | 2 | 3 | 3 |
| **AVERAGE** | **3.0** | **2.6** | **2.6** | **1.8** | **2.0** | **1.0** | **1.0** | **1.0** | **2.2** | **2.3** | **2.0** | **1.0** | **2.6** | **2.8** | **3.0** |

II B. Tech I Semester

## *SUBJECT: DATA STRUCTURES (CS302PC)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS302PC.1** | Develop a program using linear data structures such as array and circular queue | **3** |
| **CS302PC.2** | Develop a program for basic operations of Stack and its applications | **4** |
| **CS302PC.3** | Construct a program using Non-linear data structures and their applications such as trees and graphs | **3** |
| **CS302PC .4** | Construct a program using linear data structures for Linked Lists | **1** |
| **CS302PC.5** | Ability to Implement searching and sorting algorithms | **3** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS302PC.1** | 3 | 2 | 1 | 1 | | 1 | 1 | | 1 | 3 | | 1 | 3 | 2 | 3 |
| **CS302PC.2** | 2 | 2 | 2 | 1 | 2 | | | | 1 | | 2 | 1 | 3 | 3 | 3 |
| **CS302PC.3** | 3 | 2 | 2 | 2 | | 1 | | | 2 | 3 | 2 | 1 | 3 | 3 | 3 |
| **CS302PC.4** | 3 | 2 | 2 | 2 | 2 | | 1 | 1 | 2 | | | 1 | 2 | 3 | 3 |
| **CS302PC.5** | 3 | 2 | 1 | 1 | 2 | 1 | | 1 | | 1 | 1 | 1 | 2 | 3 | 3 |
| **AVERAGE** | **2.8** | **2** | **1.6** | **1.4** | **2** | **1** | **1** | **1** | **1.5** | **2.33** | **1.67** | **1** | **2.6** | **2.8** | **3** |

II B. Tech I Semester

## *SUBJECT: ANALOG AND DIGITAL ELECTRONIC LAB (CS306ES)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS306ES.1** | Know the characteristics of various components | **1** |
| **CS306ES.2** | Understand the utilization of components | **2** |
| **CS306ES.3** | Design and analyze small signal amplifier circuits AND combinational and sequential circuits. | **4** |
| **CS306ES.4** | Postulates of Boolean algebra and to minimize combinational functions | **3** |
| **CS306ES.5** | Known about the logic families and realization of logic gates. | **1** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS306ES.1** | 3 | 2 | 2 | 1 | 1 | 1 | | | 1 | 1 | 2 | 2 | 1 | 1 | |
| **CS306ES.2** | 2 | 2 | 2 | | 2 | | 1 | 1 | | | 1 | 2 | | 2 | 1 |
| **CS306ES.3** | 2 | 2 | 3 | 2 | | 1 | | | 2 | 1 | 2 | 2 | 1 | 2 | 2 |
| **CS306ES.4** | 2 | 2 | 2 | 2 | 2 | | | | | 1 | 2 | 2 | | 1 | 2 |
| **CS306ES.5** | 2 | 2 | 3 | 1 | 1 | 1 | 1 | | 1 | 1 | 3 | 2 | 1 | 1 | 1 |
| **AVERAGE** | **2.2** | **2.0** | **2.4** | **1.5** | **1.5** | **1.0** | **1.0** | **1.0** | **1.3** | **1.0** | **2.0** | **2.0** | **1.0** | **1.4** | **1.5** |

II B. Tech I Semester

## *SUBJECT: COMPUTER ORGANIZATION AND ARCHITECTURE (CS304PC)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS304PC.1** | Able to understand the basic components and the design of CPU, ALU and Control Unit. | **2** |
| **CS304PC.2** | Ability to understand memory hierarchy and its impact on computer cost/performance | **3** |
| **CS304PC.3** | Ability to understand the advantage of instruction level parallelism and pipelining for high performance Processor design. | **4** |
| **CS304PC.4** | Ability to understand the instruction set, instruction formats and addressing modes of 8086 | **2** |
| **CS304PC.5** | Ability to write assembly language programs to solve problems. | **4** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS304PC.1** | 3 | 2 | 3 | | | 1 | | 1 | 1 | | | 2 | 2 | 1 | 3 |
| **CS304PC.2** | 3 | 2 | 2 | 2 | 1 | 1 | 1 | | 1 | 1 | | 2 | 2 | 2 | 2 |
| **CS304PC.3** | 3 | 2 | 3 | | 2 | 1 | | 1 | 1 | 2 | 1 | 1 | 3 | 2 | 2 |
| **CS304PC.4** | 3 | 2 | 2 | 2 | | 1 | | | 1 | 2 | 1 | 3 | 2 | 2 | 2 |
| **CS304PC.5** | 3 | 2 | 3 | 1 | 3 | | 1 | | 1 | | 1 | | 3 | 1 | 3 |
| **AVERAGE** | **3** | **2** | **2.6** | **1.67** | **2** | **1** | **1** | **1** | **1** | **1.67** | **1** | **2** | **2.4** | **1.6** | **2.4** |

II B. Tech I Semester

## *SUBJECT: C++ PROGRAMMING LAB (CS305PC)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS305PC 1** | Analyze the drawbacks of Procedure Oriented Programming comparing with the concepts of Object Oriented Programming paradigm & C++ language features in program design. | **4** |
| **CS305PC 2** | Identify and analyze the role of Classes &Objects, constructors &destructors in program design. | **2** |
| **CS305PC 3** | Design & implement various forms of inheritance and analyze how base class constructors are called. | **1** |
| **CS305PC 4** | Evaluate operator overloading, runtime polymorphism and Generic Programming through examples. | **5** |
| **CS305PC 5** | Explore exception handling and various Stream classes, I/O operations in handling file operations. | **4** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS305PC 1** | 2 | 2 | 2 | 2 | 1 | | 1 | | | 2 | 1 | 3 | 3 | 2 | 1 |
| **CS305PC.2** | 3 | 3 | 3 | 3 | 3 | 1 | | | 2 | 2 | | 3 | 3 | 3 | 1 |
| **CS305PC.3** | 3 | 3 | 3 | 3 | 3 | | | | 3 | 2 | 1 | 3 | 3 | 3 | 1 |
| **CS305PC.4** | 3 | 3 | 3 | 3 | 3 | | | 1 | 3 | 2 | | 3 | 3 | 3 | 1 |
| **CS305PC.5** | 3 | 3 | 3 | 3 | 3 | 1 | | | 2 | 1 | | 3 | 3 | 2 | 1 |
| **AVERAGE** | **2.8** | **2.8** | **2.8** | **2.8** | **2.6** | **1** | **1** | **1** | **2.5** | **1.8** | **1** | **3** | **3** | **2.6** | **1** |

II B. Tech I Semester

## *SUBJECT: IT WORKSHOP LAB (CS308PC)*

Upon completion of the course the students get an idea of:

| Course Code | Course Outcome | Bloom's Taxonomy level |
|---|---|---|
| **CS308PC1** | Apply knowledge to assemble the computer | **4** |
| **CS308PC 2** | Learn types software installations | **2** |
| **CS308PC 3** | Ability to solve various troubles shooting. | **2** |
| **CS308PC 4** | Make use of MS Office package. | **5** |
| **CS308PC 5** | Design the documents and presentations by using MS Word and Power Point Presentation and Design the tabular and graphical representation of budget sheet etc using MS Excel. | **4** |

## *MAPPING*

| COURSE CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CS308PC.1** | 2 | 1 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | | 2 | 1 | 2 | 2 |
| **CS308PC.2** | 2 | 1 | 3 | 2 | 1 | | 1 | | | 2 | 3 | 2 | 1 | 2 | 2 |
| **CS308PC.3** | 2 | 1 | 3 | | 2 | 2 | | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| **CS308PC.4** | 2 | 1 | 1 | 2 | 1 | 1 | | | 3 | 1 | 1 | 2 | 2 | 1 | 2 |
| **CS308PC.5** | 2 | 1 | | 1 | | 1 | | | 2 | 1 | | 2 | 2 | 1 | 2 |
| **AVERAGE** | **2** | **1** | **2.5** | **1.5** | **1.25** | **1.5** | **1** | **1** | **2** | **1.6** | **2** | **2** | **1.6** | **1.4** | **2** |