



**B.L.D.E. Association's**

**S.B.ARTS & K.C.P SCIENCE COLLEGE  
VIJAYAPUR**

**M.Sc. Computer Science**

**A REPORT ON**

**Bridge Course**

**For**

**M.Sc (CS)-I Sem Students**

**2016-2017**

**Resource Person**

**Prof(Smt) S.D.Patil**

**Prof(Smt) R.D.Joshi**

**Prof. M. S.Jevoor**

**Prof S.V. Vambase**

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VIJAYAPUR**

**M.Sc(CS) Programme**

**NOTICE**

**It is here by informed to all the M.Sc(CS) I Semester students that there will be Bridge Course from 11<sup>th</sup> July 2016 - 18<sup>th</sup> July 2016 .So all of you should attend and get the benefit.**



**Co-ordinator**

M.Sc. (C.S.) Programme  
S.B.Arts & K.C.P.Science College,  
Vijayapur.



**IQAC, Co-ordinator**

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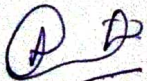


**Principal**

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**S.B.Arts and K.C.P Science College, Bijapur**  
**M.Sc(CS) Programme**  
**M.Sc(CS)- I Semester 2016-2017**  
**Bridge Course Time Table**

<b>Date</b>	<b>Time</b>	<b>Subject</b>
11/7/2016	11.00 am to 1.00 pm	Operating System
12/7/2016	11.00 am to 1.00 pm	Linux Operating System
13/7/2016	11.00 am to 1.00 pm	Introduction to Programming
14/7/2016	11.00 am to 1.00 pm	C Programming
15/7/2016	11.00 am to 1.00 pm	Data Structure
16/7/2016	11.00 am to 1.00 pm	Applications of Data Structures
18/7/2016	11.00 am to 1.00 pm	Logic Gates



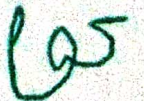
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**About Bridge Course**

The Bridge Course is aimed to act as a buffer for the new entrants, with an objective to provide adequate time for the transition to hard-core engineering courses. During this interaction of bridge course week with the faculty and their classmates, the students will be equipped with the knowledge and the confidence needed to take on bigger challenges as future engineers of this country.

**Objectives: To act as a buffer for the new entrants.**

- To provide adequate time for the transition to hard-core engineering courses.
- Focus on fostering a strong sense of ethical judgment and moral fortitude.
- Applications based self-learning and intermingling of a large cross section of students from vastly varying backgrounds.
- A breather, to prepare themselves before courses for first year engineering commence.
- The students will be equipped with the knowledge and the confidence needed to take on bigger challenges.
- Nurture a deeper understanding of the local and global world and our place in at as concerned citizens of the world.
- Interactive and Active Learning by Doing have been weaved into the Bridge Course.
- Active learning with the help of other students.

### **Introduction of programming and its Techniques**

What is data ? definition and example, information definition and example , instructions definition and example, information definition and example , language definition , types of language like HLL, LLL, ALL and MLL and examples. History of language starting with B , c and c++ etc, Methodologies like procedural, mathematics, structure , object oriented , aspect oriented etc then various approach of Top-down and Bottom-Up approach and examples

### **Introduction of Operating System and its services**

An operating system is a program that acts as an interface between the user and the computer hardware and controls the execution of all kinds of programs.

Following are some of important functions of an operating System.

- Memory Management
- Processor Management
- Device Management
- File Management
- Security
- Control over system performance
- Job accounting
- Error detecting aids
- Coordination between other software and users

### **Linux**

- **Kernel** – Kernel is the core part of Linux. It is responsible for all major activities of this operating system. It consists of various modules and it interacts directly with the underlying hardware. Kernel provides the required abstraction to hide low level hardware details to system or application programs.
- **System Library** – System libraries are special functions or programs using which application programs or system utilities accesses Kernel's features. These libraries implement most of the functionalities of the operating system and do not requires kernel module's code access rights.
- **System Utility** – System Utility programs are responsible to do specialized, individual level tasks.

### **Mapping of Computer Hardware with logic gates**

**Processor Architecture:** Introduction to Processor, architecture and applications.

**Components:** components-ALU, Coprocessor, clock signal, synchronization of modules.

**Functionality:** Multiplexer, Demultiplexer, Address bus and Data bus, DMA.

**Mapping:** significance of logic gate in design of memory and processor.

## Data Structure

Data Definition defines a particular data with the following characteristics.

- Atomic: Definition should define single concept
- Traceable: Definition should be able to map to some data element.
- Accurate: Definition should be unambiguous.
- Clear and Concise: Definition should be understandable.

### Basic Operations

The data in the data structures are processed by certain operations. The particular data structure chosen largely depends on the frequency of the operation that needs to be performed on the data structure.

- Traversing
- Searching
- Insertion
- Deletion
- Sorting
- Merging
- 

### Real life applications of data structures:

1. To store a set of programs which are to be given access to a hard disk according to their priority?
2. For representing a city region telephone network.
3. To store a set of fixed key words which are referenced very frequently
4. To represent an image in the form of a bitmap.
5. To implement back functionality in the internet browser.
6. To store dynamically growing data which is accessed very frequently, based upon a key value.
7. To implement printer spooler so that jobs can be printed in the order of their arrival.
8. To record the sequence of all the pages browsed in one session.
9. To implement the undo function in a text editor.
10. To store information about the directories and files in a system.



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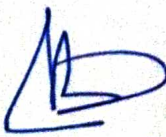
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M.Sc(CS) Programme

Bridge Course

S.No	Name of Students	11/7/2016	12/7/2016	13/7/2016	14/7/2016	15/7/2016	16/7/2016	18/7/2016
1	AKSHAY M KAMBALE	Akshay	Akshay	Akshay	Akshay	Akshay		Akshay
2	HARISH V KULKARNI	Harish	Harish	Harish		Harish	Harish	Harish
3	POORNIMA B HANJI	Poornima	Poornima	Poornima		Poornima	Poornima	
4	RAGHAVENDRA S KULKARNI	R. S. Kulkarni	R. S. Kulkarni	R. S. Kulkarni	R. S. Kulkarni	R. S. Kulkarni		R. S. Kulkarni
5	REKHA N RATHOD	Rekha	Rekha		Rekha	Rekha	Rekha	
6	ROOPA A DHARWAD	Roopa	Roopa	Roopa	Roopa	Roopa		Roopa
7	SHANKAR A JADHAV	Shankar	Shankar	Shankar	Shankar	Shankar	Shankar	Shankar
8	SHOBHA S YALAGI	Shobha	Shobha	Shobha	Shobha	Shobha	Shobha	Shobha
9	SHRIGOURI S DONAGI	Shrigouri	Shrigouri		Shrigouri	Shrigouri	Shrigouri	Shrigouri
10	SOUMYA S NARASANAGOUDAR	Soumya	Soumya	Soumya	Soumya	Soumya	Soumya	
11	VIJAYALAKSHMI S BANTNAL	Vijayalakshmi	Vijayalakshmi	Vijayalakshmi	Vijayalakshmi	Vijayalakshmi		Vijayalakshmi

  
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