



**Computer Laboratory based on (Data Structure and PHP, Big data)**  
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**[PRACTICAL]**

<b>Semester III</b>	<b>Credits: 6</b>	<b>Subject Code: BCP32106</b>	<b>Lectures: 48</b>
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**Course Outcomes:**

At the end of this course ,the learner will be able to,

- Relate the concepts of ADTs .
- Analyze the concepts of linear data structures – lists, stacks, and queues .
- Apply sorting, searching and hashing algorithms .
- Analyze how server-side programming works on the web.
- Create and evaluate data in a MySQL database.
- Create programs using R machine.

<b>Unit 1: Data Structure</b>	<b>16</b>
<ul style="list-style-type: none"><li>• Assignments on pointers and DMA</li><li>• Assignments to demonstrate use of Polynomial</li><li>• Assignments to demonstrate use of Linked List (Singly Linked List, Doubly Linked List)</li><li>• Assignments on Sorting and Searching</li><li>• Assignments to demonstrate use of stack</li><li>• Assignments to demonstrate use of Queue</li></ul>	

<b>Unit 2: PHP</b>	<b>16</b>
<ul style="list-style-type: none"><li>• Assignments on \$_GET and \$_POST</li><li>• Assignments to understand the concept of array in PHP</li><li>• Assignments to demonstrate the use of function in PHP</li><li>• Assignments on String</li><li>• Assignment on Cookies and Session</li><li>• Assignment on database</li></ul>	

<b>Unit 3: Big data</b>	<b>16</b>
<ul style="list-style-type: none"><li>• Assignments on vectors</li><li>• Assignments to create data frames</li><li>• Assignments to demonstrate the use of bar plot</li><li>• Assignments on String</li><li>• Assignment on lists</li><li>• Assignment on levels of factor.</li></ul>	

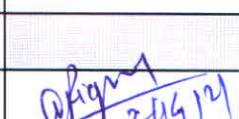
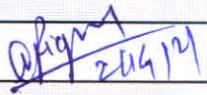
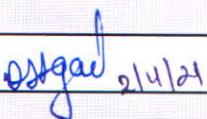
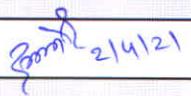
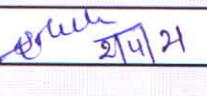
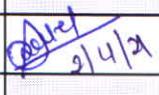
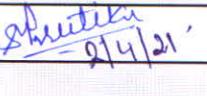
<b>Board Of Studies</b>	<b>Name</b>	<b>Signature</b>
Head of the Department	Asst. Prof. Smita Borkar	

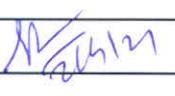


#12 hours for Library work, assignments practical or field work

**Reference Books:**

- Sahni, *Fundamentals of Data Structure in C*, Universities Press Pvt.Ltd,2008
- Sahni, *An Introduction to Data Structure and Algorithms*, James A Storer,2009
- Vikram Vaswani *PHP: A Beginner's Guide* 1st Edition McGraw-Hill Osborne Media;
- Joel Murach and Ray Harris *PHP and MySQL* (2nd Edition)
- Steven Holzner ,*The Complete Reference Paperback* , Jul 2017

Board Of Studies	Name	Signature
Head of the Department	Prof. Smita Borkar	 21/4/21
Faculty*	Prof Monika Rajguru	 21/4/21
Faculty*	Prof. Deepali Gupta	 21/4/21
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Subject Expert (Outside SPPU)	Prof Sachin Bohite	 21/4/21
VC Nominee	Prof Anjum Patel	 21/4/21
Industry Expert	Ms Shrutika Wayal	 21/4/21
One Alumni***	Ms. Vidhi Thakkar	

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