

**SRM UNIVERSITY, Sonepat**  
**COURSE MODULE FOR B Tech in CSE with specialization in Big Data & Analytics in association with IBM**

**Module Title** : **Software Foundation and Emerging Areas of Technology**  
**Programme** : **BTech (CSE) in specialization in Big Data & Analytics in association with IBM**  
**Term** : **1<sup>st</sup> year 1<sup>st</sup> Semester**  
**Credits** :

***Time required in terms of Student Learning: -***

**32 Hours**

***Aim & Objectives:***

***Teaching and Learning Approach:***

The course will focus on using a teacher-student interactive and decision-oriented learning exercises.

For the active learning mode in the course to be effective, participating in class discussions is extremely important along with self paced learning to clear the concepts of software.

In addition to the lectures, discussions and demonstrations, students would be required to work on sample applications and exercises

***Guided Study:***

Guided study will include Online learning from IBM Career Education @ Campus Portal, text readings, articles on contemporary issues in organization, assignments, case analysis and power point presentations.

***Assessment:***

Assessment of the student will be based on mid-term and end term examination and continuous assessment subject to class participation, assignments and presentations.

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*Indicative Contents:*

<b>Topic</b>	<b>Coverage</b>
<b>Unit 1</b>	Brief History of Computing, Introduction to computing
<b>Unit 2</b>	The Structure of C programs, Literals, variables and types, Expressions, operators, Conditionals, Loops and random numbers, Arrays, Functions, Pointers and Dynamic Memory Allocation, Structures, Applications: searching and sorting, File input and output
<b>Unit 3</b>	<b>Introduction to Emerging Areas of Technology</b>  Cloud Computing  Business Analytics  Mobile Apps Development  Social Business  Information Security

*Text Material & resources: IBM Course Material*

**Software Foundation and Emerging Areas of Technology**