Course Objective:

The objective of this class is to expose the student to procedural programming using C++ and to increase the depth of students' knowledge about several implementation issues. Knowing C++ will be useful in the students' jobs in IT because it will enable them to code efficiently, communicate effectively with colleagues and understand an improve software development practices.

<table>
<tr><td colspan="10">C++ Programming language (18BSM 605)</td></tr>
<tr><td colspan="5">Teaching Scheme</td><td colspan="5">Examination Scheme</td></tr>
<tr><td rowspan="2">L</td><td rowspan="2">T</td><td rowspan="2">P</td><td rowspan="2">C</td><td rowspan="2">Hrs/Week</td><td colspan="3">Theory</td><td colspan="2">Practical</td><td rowspan="2">Total Marks</td></tr>
<tr><td>MS</td><td>ES</td><td>IA</td><td>LW</td><td>LE/Viva</td></tr>
<tr><td>0</td><td>0</td><td>4</td><td>2</td><td>4</td><td>--</td><td>--</td><td>--</td><td>50</td><td>50</td><td>100</td></tr>
<tr><td colspan="10">Basic of Object Oriented programming and software design. C++ object-oriented programming, C++& ANSI standard C, Predefined class in C++. Building objects with classes, Defining operations on objects.<br><br>Using inheritance in C++, Virtualfunctions and Polymorphism. Function overloading, Operator Overloading,<br><br>Constructor, Multiple costructors in a class, Dynamic constructor, Constructor overloading, Destructor, Friend Functions Overview of File Handling, streams.</td></tr>
<tr><td colspan="10">Text and Reference books<br>1. Object-Oriented Programming with C++,Balagurusamy, TMH.<br>2. Object Oriented Programming & C++, R. Rajaram,New Age International.<br>3. C++ The complete Reference, Schildt, 4th Ed, TMH.<br>4. Object-Oriented Programming with C++&JAVA, Samanta, PHI.</td></tr>
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Course Outcomes:

A student completing this course will be able to:

- Apply elementary techniques involving arithmetic operators and mathematical expressions in C++ programming
- Choose an appropriate data type to represent data
- Write C++ programs that use selection (if, switch, conditional operator)
- Write C++ programs that use loops (while, do while, for)
- Write C++ programs that use sequential files for input and output
- Write C++ programs that make use of functions for transfer of control
- Write C++ programs that use arrays, including sorting and searching arrays
- Write C++ programs that use pointers
- Solve programming problems using C++