Certificate Course in Programming in C++

Objective of the Course:
By the end of this course, you will be able to:
- Read and write C++ code
- Use C++ interfaces and libraries
- Understand how to use object oriented design principles in the context of the C++ language
- Understand key concepts such as abstract interfaces, polymorphism, and data abstraction.

Learning Outcomes:
At the conclusion of this course, you should be able to:
- Understand object-oriented programming features in C++,
- Apply these features to program design and implementation,
- Understand object-oriented concepts and how they are supported by C++
- Gain some practical experience of C++
- Understand implementation issues related to object-oriented techniques,
- Build good quality software using object-oriented techniques, and
- Understand the role of patterns in object-oriented design

Duration of the Course
(in hours) 80 hrs

Appr. Fees (INR): Rs.4000/-

Minimum Eligibility Criteria and pre-requisites, if any
Basic knowledge of any programming Language

Outline of Course

<table>
<thead>
<tr>
<th>S. No</th>
<th>Topic</th>
<th>Minimum No. of Hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction to OOP’s concept</td>
<td>02 hrs</td>
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<tr>
<td>2</td>
<td>Data types. Operator &amp; Logical /looping</td>
<td>05 hrs</td>
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<tr>
<td>3</td>
<td>Functions and arrays</td>
<td>15 hrs</td>
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<td>4</td>
<td>Classes &amp; objects</td>
<td>10 hrs</td>
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<td>5</td>
<td>Inheritance</td>
<td>10 hrs</td>
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<td>6</td>
<td>Polymorphism</td>
<td>10 hrs</td>
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<td>7</td>
<td>Operator overloading</td>
<td>05 hrs</td>
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<tr>
<td>8</td>
<td>Function overloading</td>
<td>05 hrs</td>
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<tr>
<td>9</td>
<td>Exception handling</td>
<td>05 hrs</td>
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<tr>
<td>10</td>
<td>File Handling Operations</td>
<td>08 hrs</td>
</tr>
<tr>
<td>11</td>
<td>Introduction to Template</td>
<td>05 hrs</td>
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Theory / Lecture Hours: 40 hrs
Practical / Tutorial / Lecture Hours: 40 hrs
Total Hours: 80 hrs
Books recommended for reference and reading:
“Object Oriented programming with C++”
By M.T.Somashekara, D.S.Guru,
H.S.Nagendraswamy, K.S.Manjunatha(PHI)

Group Code: PRGL                Group Name: Programming Languages
Course Code: CT02                Course Name: Certificate Course in Programming in C++