

Department of Computer Science & Engineering National Institute of Technology Srinagar				
Course Title	Object Oriented Programming lab	Semester	3 rd	
Department	Computer Science & Engineering	Course Code	CST202	
Credits	01	L	T	P
Course Type	Lab	0	0	2
Course Objectives				
<ul style="list-style-type: none"> • The student should be able to explain the fundamental properties of the C++ language. • The student should be able to combine the elements of the C++ language in developing structured programs. • The student should be able to demonstrate the skills necessary to correctly compile, debug, and test programs in C++. 				
Learning Outcomes				
<p>At the end of the course student will be able to:</p> <ul style="list-style-type: none"> • Apply C++ features to program design and implementation • Explain object-oriented concepts and describe how they are supported by C++ • Use C++ to demonstrate practical experience in developing object-oriented solutions • Analyse a problem description and design and build object-oriented software using good coding practices and techniques • Use common software patterns in object-oriented design and recognise their applicability to other software development contexts. 				
Course Synopsis				
The objective of the lab course to familiarise students with C++ concepts.				
Course Outline / Content				
Unit	Topics			Week
Lab #1, #2	Simple programs in C++ using inbuilt input/output functions.			2
Lab #2	Function overloading, default arguments in C++.			1
Lab #3	Simple class design in C++, namespaces, objects creations.			1
Lab #4	Class design in C++ using dynamic memory allocation.			1
Lab #5	Constructor, Destructor, copy constructors.			2
Lab #6	Operator overloading, friend functions.			1
Lab #7	Overloading assignment operator, type conversions.			2
Lab#8	Inheritance, run-time polymorphism.			1
Lab #9	Template design in C++.			1
Lab #10	Interfaces and Inheritance.			1
Lab #11	File and Exception handling.			1
Text Books				
1.	Robert Lafore, "Object Oriented Programming in Turbo C++", Galgotia Publications,			
2.	Balagurusamy, „Object Oriented programming with C++", Tata McGraw Hill.			

References

1.	Bjarne Stroustrup, "The C++ programming Language", Addison Wesley,
2.	Booch, "Object Oriented Analysis and Design with Applications, Addison Wesley.
3.	Chair H. Pappas & William H. Murray, "The Complete Reference Visual C++", TMH.