

<b>Course Title</b>	<b>Object Oriented Programming Lab</b>
<b>Course Code</b>	<b>CC-211L</b>
<b>Credit Hours</b>	1
<b>Category</b>	Computing core
<b>Prerequisite</b>	Programming Fundamentals
<b>Co-Requisite</b>	None
<b>Follow-up</b>	Data Structures and Algorithms, Mobile Application Development
<b>Course Description</b>	Implementation: the concepts studied in “CC-211 Object Oriented Programming”, Review: Data-Driven Programming. Classes and Objects: Defining Classes and Object Initialization, setter/getter, Constructor/Destructor. Resource Management: Allocation/De-Allocation, const data members and function. Composition: Aggregation, Friend function/classes, Generalization, Multilevel/Multiple Inheritance, Runtime Polymorphism, Singleton/Proxy/Adapter Pattern, Ad Hoc Polymorphism. Templates. Stream I/O. File Processing. Exception Handling.
<b>Text Book(s)</b>	H. M. Deitel, P. J. Deitel, C++ How to Program, 5th Ed., Prentice-Hall, 2005, ISBN: 0-13-185757-6.
<b>Reference Material</b>	R. Lafore, Object-Oriented Programming in C++, 4th Ed., Sams Publishing, 2002, ISBN: 0-672-32308-7. Victor Shtern, Core C++ A Software Engineering Approach, 1st Ed., Prentice Hall PTR, 2000, ISBN: 0-13-085729-7. Stephen Parata, C++ Primer Plus, 5th Ed., Sams Publishing, 2005, ISBN: 0-672-32697-3. Bjarne Stroustrup, The C++ Programming Language, 4th Ed., Addison Wesley, 2013, ISBN: 0-321-56384-0.