Course Name	Object-oriented Programming	**Course Code**	213 COMP-3		
Credit Hours	3	**Contact Hours**	**Theory**	**Lab**	**Total**
			2	2	4
Offered as	☐ **University Requirement** ☒ **College Requirement** ☐ **Program Requirement**		☒ **Core** ☐ **Elective**		
Offered in	☒ **COMP - Computer Science** ☒ **ITEC- Information Technology** ☒ **CNET- Computer & Network Engineering**				
Level	5th Level	**Prerequisite**	112 Comp-3 – Programming Language II		

Course Description:

This course provides the fundamental concepts of object-oriented design and implementation of software systems. The list of topics includes the fundamental concepts of classes, objects, methods, object orientation techniques such as abstraction and modularization, code coupling and refactoring, encapsulation, inheritance/subtyping and polymorphism, abstract data types. Students will acquire basic knowledge on how to translate problem statement into an object-oriented software that is easy to maintain (change a feature, remove a feature, fix a bug etc.) and extend.

Course objectives:

- Discuss the philosophy of object-orientation.
- Explain the abstraction mechanisms to support the creation of reusable software components.
- Explain the modularization mechanisms to solve complicated problems.
- Illustrate object interactions in real-world problems to come up with straightforward object-oriented solutions.
- Understand the importance of encapsulation, inheritance/subtyping and polymorphism to improve the design of a software system.
- Familiarize students with some design principles for maintainable and extendable software.

Grading	☒ **Exam 1**	**10%**	☐ **Quiz**	**10%**	☒ **Assignment(s)**	**20%**
	☒ **Final**	**40%**	☒ **Lab**	**20%**	☐ **Attendance**	**-**

Text Book:

- Objects First with Java: A Practical Introduction Using BlueJ 6th edition 2017, ISBN-13: 978-0134477367

Reference Book:

- JAVA: The Complete Reference, Herbert Scheldt, McGraw-Hill, 10th edition 2017, ISBN: 978-1-259-58933-1