2.	Advances in biotechnology Vol-II, (Fuels, chemical.food and waste treatment) Murray Moo-Young,C.W. gambell and C.Vezina.
3.	Introduction to Plant Biotechnology, H. S. Chawla
4.	Fundamentals of Food Biotechnology By Byong H. Lee,wiley publications
5.	Food Biotechnology in Ethical Perspective edited by Julie Eckinger,second edition by Paul P Thompson.

Object-oriented Programming

Details of course:-

Course Title	Course Structure			Pre-Requisite
	L	T	P	
Object-oriented Programming (BT313)	3	1	0	NIL

Course Objective: Basics of programming language and application

Course Outcomes:

1. Discuss the fundamentals of object-oriented paradigm and C++.
2. Outline classes and objects, objectives of C++ and characteristics.
3. Introduce dynamic objects, pointers to objects, array of objects, pointers to object members, this pointer, self-referential classes.
4. Understanding of Operator overloading and Inheritance.
5. Evaluate the generic programming with templates their functions and different types. Analyse data types, byte code and the basics of programming language.

S. No.	Contents	Contact Hours
1	**Object oriented paradigm & C++ at a glance:** Evolution of programming paradigm, structured versus object-oriented development, elements of object-	**8**

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	oriented programming, Objects, classes, methods, popular OOP languages, software reuse.	
2	**Classes and objects:** Introduction, Class revisited, constant objects and constructor, static data members with constructors and destructors, constructor overloading, nested classes, objects as arguments, returning objects, friend functions and friend classes, constant parameters and member functions, static data and member functions.	**7**
3	**Dynamic objects:** Introduction, pointers to objects, array of objects, pointers to object members, this pointer, self-referential classes	**9**
4	**Operator overloading and Inheritance:** Overloading of new and delete operators, conversion between objects and basic types, conversion between objects of different classes, overloading with friend functions, abstract classes, inheritance types , virtual base classes, virtual functions, pointer to derived class objects, and base class objects, pure virtual functions, virtual destructors.	**9**
5	Generic programming with templates: Introduction, function templates, overloaded function templates, class templates, inheritance of class template, class template containership, class template with overloaded operators. Introduction to byte code, security and portability, Data Types, variables, operators, arrays, type conversion and casting, type promotion, Control statements, standard input-output, Designing Classes, constructors, methods, access specifies : public, private, protected, inheritance, packages and interfaces, Math, String, Vectors, and Array List classes, polymorphism: function and operator overloading, function overriding, abstract classes	**9**
	Total	**42**

Books: -

S. No.	Name of Authors /Books / Publishers
1.	E Balaguruswamy, "Object Oriented Programming with C++", The McGraw Hill Companies
3.	Patrick Naughton, S. Herbert, "C++: The Complete Reference", Wiley Dream Tech
4.	Jeri R.Hanly, Elliot B. Koffman, "Problem Solving and Program Design in C", Pearson Addison-Wesley
5.	Behrouz A. Forouzan, Richrad F. Gilberg "A structured Programming Approach Using C", Thomson Computer Science-3rd edition [India edition] (2007)
6.	Budd, "An Introduction to Object Oriented Programming", Addison Wesley
	K.R.Venugopal, Rajkumar Buyya, T.Ravishankar, "Mastering C++", TMH
7	Lippman and Lajoie, "C++ Primer ", Addison Wesley

Introduction to Biomedical Engineering

Details of course:-

Course Title	Course Structure	Pre-Requisite

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