

COURSE CODE	COURSE TITLE	L	T	P	C
1152IT126	COMPONENT BASED TECHNOLOGY	3	0	0	3

Course Category:

~~Foundation (0) / Program Core (1) / Program Elective (2) / Allied Elective (3) / University Elective (4) / Value Education Elective (5) / Independent Learning (6) / Industry – Higher Learning Institute Interaction (7)~~

a. Preamble :

This course Component Based Technology provides an introduction and Basic Concepts of Various Platform Component Based Technology

b. Prerequisite Courses:

Sl. No	Course Code	Course Name
1	1151CS104	JAVA PROGRAMMING
2	1151CS305	INTERNET PROGRAMMING

c. Related Courses:

Sl. No	Course Code	Course Name
1		MINI PROJECT
2		PROJECT WORK

d. Course Educational Objectives :

Students are exposed to:

- Introduces in depth JAVA, CORBA and .Net Components
- Deals with Fundamental properties of components, technology and architecture and middleware.
- Component Frameworks and Development are covered in depth.

e. Course Outcomes:

Upon the successful completion of the course, learners will be able to

CO Nos.	Course Outcomes	Level of learning domain (Based on revised Bloom's taxonomy)
CO1	Explain Component Based Architecture	K2
CO2	Design a Java Thread and Create a bean for a Application	K2
CO3	Design and Implement CORBA Based Technology Component	K3
CO4	Design and Implement .NET Based Technology Component	K3
CO5	Explain about Component Based connectors and testing Tools	K2

f. Correlation of COs with Programme outcomes:

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COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H	H	L									
CO2	M											
CO3	H	H	H		L							
CO4	H	H	H		M							
CO5	H	H	M		M							

g. Course Content:

UNIT I INTRODUCTION

9

Software Components – objects – fundamental properties of Component technology – modules – interfaces – callbacks – directory services – component architecture – components and middleware

UNIT II JAVA BASED COMPONENT TECHNOLOGIES

9

Threads – Java Beans – Events and connections – properties – introspection – JAR files – reflection – object serialization – Enterprise Java Beans – Distributed Object models – RMI and RMI-IIOP

UNIT III CORBA COMPONENT TECHNOLOGIES

9

Java and CORBA – Interface Definition language – Object Request Broker – system object model – portable object adapter – CORBA services – CORBA component model – containers – application server – model driven architecture

UNIT IV .NET BASED COMPONENT TECHNOLOGIES

9

COM – Distributed COM – object reuse – interfaces and versioning – dispatch interfaces – connectable objects – OLE containers and servers – Active X controls – .NET components - assemblies – appdomains – contexts – reflection – remoting

UNIT V COMPONENT FRAMEWORKS AND DEVELOPMENT 9 Connectors – contexts – EJB containers – CLR contexts and channels – Black Box component framework – directory objects – cross-development environment – component-oriented programming – Component design and implementation tools – testing tools - assembly tools

TOTAL : 45

h. Learning Resources

i. Text Books

1. Clemens Szyperski, “Component Software: Beyond Object-Oriented Programming”, Pearson Education publishers, 2013

ii. REFERENCES

1. Ed Roman, “Mastering Enterprise Java Beans”, John Wiley & Sons Inc., 2012.
2. Mowbray, “Inside CORBA”, Pearson Education, 2013.
3. Freeze, “Visual Basic Development Guide for COM & COM+”, BPB Publication, 2011.