

STATUS: A

COMMON COURSE NUMBER: COP 2707C

COURSE TITLE: Distributed Application Programming Using CORBA

CREDIT HOURS: 3

CONTACT HOURS BREAKDOWN:

Lecture/Discussion 48

Lab 16

Other 00

Contact Hours/Week 4

CATALOG COURSE DESCRIPTION:

Prerequisite: COP 1000C and COP 2703C

Corequisite: None

This course provides the student with a comprehensive understanding of the common object request broker Architecture. The student will practice the mechanism by which objects transparently make request and receive responses through an application framework between objects, different languages, and different machines.

General Education Requirements - Associate of Arts Degree, meets Area(s):
General Education Requirements - Associate in Science Degree, meets Area(s):

UNIT TITLES:

1. Introduction to CORBA
2. Hello World
3. ORB
4. BOA - Basic Object Adaptor
5. Persistent Objects
6. CORBA Services

I. Course Overview:

Upon successful completion of this course, the students should be able to design and implement a distributed application program using CORBA for a wide range of functions.

II. Units:

Unit 1. Introduction of CORBA

General Outcome:

- 1.0 The students should be able to explain what CORBA and OMG are and the major benefits of using CORBA.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 Discuss OMG and CORBA history.
- 1.2 Describe the problems that are solved by CORBA.
- 1.3 Explain the benefits of CORBA.
- 1.4 Describe the major services of CORBA.
- 1.5 Discuss the major competing technologies to CORBA.

Unit 2. Hello World

General Outcome:

2.0 The students should be able to write a simple CORBA application.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

2.1 Write simple IDC.

2.2 Write a simple client/server application to do "Hello World".

2.3 Use the CORBA development tools.

Unit 3. ORB

General Outcome:

3.0 The students should be able to describe the functions and components of ORB.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

3.1 Explain how a client finds a server.

3.2 Explain how a server processes client requests.

3.3 Explain how a server responds to a client request.

Unit 4. BOA - Basic Object Adaptor

General Outcome:

4.0 The students should be able to explain what BOA does.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 4.1 Explain why CORBA server can serve multiple clients.
- 4.2 Explain various types of CORBA servers (persistent, shared, unshared, etc.).

Unit 5. Persistent Objects

General Outcome:

5.0 The students should be able to develop a CORBA client/server applications using persistent objects.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 5.1 Explain when persistent object should be used.
- 5.2 Explain how persistent objects are implemented in ORB.
- 5.3 Write applications that use persistent objects.

Unit 6. CORBA Services

General Outcome:

6.0 The students should be able to explain the functions of major CORBA services.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 6.1 Install and configure ORB and its services.
- 6.2 Write CORBA client/server applications and uses.
- 6.3 Implement CORBA services such as: naming and security.