



# Broward Community College

## Course Outline

STATUS:   A  

COMMON COURSE NUMBER:   CIS 2321  

COURSE TITLE:   Systems Development and Design  

CREDIT HOURS:           3          

**CONTACT HOURS BREAKDOWN:**

Lecture/Discussion           48          

Lab   

Other   

Contact Hours/Week           3          

**CATALOG COURSE DESCRIPTION:**

Prerequisite: COP 1120 or COP1170 or COP 1334C

Corequisite: None

This course surveys systems and procedures of internal control. Students learn through lectures and practical case studies how to apply equipment and programming techniques to actual business data processing applications.

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 Systems Analysis and Design
2. Initiation and Preliminary Investigation of a System Project
3. Detailed Investigation and Analysis Phase
4. Design Phase
5. Development Phase
6. Implementation and Evaluation Phase

## **I. Course Overview:**

Upon successful completion of this course, the students should be able to evaluate a system's problem by applying appropriate investigatory techniques, design input and output media, and present the benefits and costs of the proposal.

## **II. Units:**

### **Unit 1. Introduction to Systems Analysis and Design**

#### General Outcome:

- 1.0 The students should be able to describe the purpose of systems analysis and design, its relationship to the business enterprise, and the conceptual approach of analyzing and developing a new system.

#### Specific Learning Outcomes:

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

- 1.1 Describe the structure of a business enterprise.
- 1.2 Describe the concept of a system.
- 1.3 Describe the conceptual approach used to analyze, design, develop, and implement a data processing system.
- 1.4 Describe the relationship of the system department within the business enterprise.
- 1.5 Describe the role of the analyst.
- 1.6 Discuss the system profession and identify career opportunities.

## Unit 2. Initiation and Preliminary Investigation of a System Project

### General Outcome:

2.0 The students should be able to initiate a system study, determine its feasibility; document, record, and present the results of the study.

### Specific Learning Outcomes:

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

- 2.1 Describe the process for initiating a system project.
- 2.2 Determine and describe the scope of the project.
- 2.3 Identify and define the nature of the problem under study.
- 2.4 Identify and collect the necessary information for a feasibility system study.
- 2.5 Analyze the data needed in determining the feasibility of a system.
- 2.6 Apply documenting techniques in developing a preliminary investigation on a system.
- 2.7 Prepare a preliminary investigation report.
- 2.8 Apply techniques of estimating the project's cost.

### Unit 3. Detailed Investigation and Analysis Phase

#### General Outcome:

3.0 The students should be able to conduct a thorough investigation and analysis of a system under study, document findings, and present the results.

#### Specific Learning Outcomes:

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

- 3.1 Identify and define the problem to be studied.
- 3.2 Collect the required data for analysis using the following techniques:
  - 3.2.1 Observe existing operations
  - 3.2.2 Prepare and use a questionnaire
  - 3.2.3 Interview selected personnel
  - 3.2.4 Review appropriate documents
- 3.3 Flowchart the system and use other appropriate chart techniques for recording system facts and procedures.
- 3.4 Prepare a detailed investigation report.
- 3.5 Plan the report presentation.
- 3.6 Prepare results of the investigation for use in the design phase.

## Unit 4. Design Phase

### General Outcome:

4.0 The students should be able to apply the techniques for designing inputs, outputs, files, and processing requirements of a system.

### Specific Learning Outcomes:

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

- 4.1 Determine the required system outputs and design their form and format.
- 4.2 Determine the required system inputs, and design and document their form and format.
- 4.3 For system files needed, determine the following:
  - 4.3.1 Contents of data elements
  - 4.3.2 File organization and access method
  - 4.3.3 Methods of file documentation
- 4.4 Determine the processing requirements needed to convert inputs to desired outputs and explain how to document these procedures.
- 4.5 Create editing procedures and controls to assure system reliability and integrity.
- 4.6 Create procedures for file security.
- 4.7 Identify and describe types of equipment used for data entry, input/output, and file storage.
- 4.8 Develop program specifications.
- 4.9 Document the system design and prepare a report for presentation.
- 4.10 Prepare the results of the design phase for use in the development phase.

## Unit 5. Development Phase

### General Outcome:

5.0 The students should be able to construct the system from the specifications developed in the design phase.

### Specific Learning Outcomes:

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

- 5.1 Plan for system implementation.
- 5.2 Prepare procedure manuals and develop a plan for personnel training.
- 5.3 Plan the acquisition and installation of new equipment, and identify critical factors in this process.
- 5.4 Identify computer programs needed and develop specifications for program functions and design.
- 5.5 Test individual system components and integrated system components.
- 5.6 Document the results and prepare a report of the development phase for presentation.
- 5.7 Prepare the results of the development phase for use in the implementation and evaluation phase.

## Unit 6. Implementation and Evaluation Phase

### General Outcome:

6.0 The students should be able to convert the developed system into an operational system and evaluate its success.

### Specific Learning Outcomes:

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

- 6.1 Develop a plan for implementation of the system.
- 6.2 Develop a plan for phasing out the system-design team and phase-in a system maintenance group.
- 6.3 Evaluate the system's performance against preestablished criteria.
- 6.4 Establish a process for documenting modifications to the implemented system.
- 6.5 Create a system evaluation report for presentation.