



Western Technical College

## 10154161 Crystal Report Writer

### Course Outcome Summary

#### Course Information

<b>Description</b>	Students will create and modify reports using Crystal Report Writer. Record selection, sorting, grouping, summarizing, queries, exporting to other formats, parameters, formulas and subreports are among the topics covered.
<b>Career Cluster</b>	Information Technology
<b>Instructional Level</b>	Associate Degree Courses
<b>Total Credits</b>	3
<b>Total Hours</b>	72

#### Pre/Corequisites

Prerequisite 10154108 Database Concepts

#### Textbooks

No textbook required.

#### Success Abilities

1. Live Responsibly: Foster Accountability
2. Refine Professionalism: Improve Critical Thinking
3. Refine Professionalism: Participate Collaboratively
4. Refine Professionalism: Practice Effective Communication

#### Program Outcomes

1. Manage software

2. Provide end user support
3. Solve information technology problems

## Course Competencies

### 1. Design reports.

#### Assessment Strategies

- 1.1. Lab
- 1.2. Objective and Application Test
- 1.3. Project

#### Criteria

*You will know you are successful when*

- 1.1. you explain the benefits of using Crystal Report Writer.
- 1.2. you plan a Crystal report by outlining the purpose for the report, determine the layout, knowing what data to use in the report and how you want the data organized.
- 1.3. you determine printing area characteristics by knowing and using the report header, page header, group header, detail area, group footer, report footer and page footer areas within a Crystal report.

#### Learning Objectives

- 1.a. Describe the benefits of using Crystal Reports
- 1.b. Plan the content of a Crystal Report
- 1.c. Determine printing area characteristics

### 2. Create reports.

#### Assessment Strategies

- 2.1. Lab
- 2.2. Application Test
- 2.3. Project

#### Criteria

*You will know you are successful when*

- 2.1. you create a blank report through Crystal, using a database, query and dictionary as data source type.
- 2.2. you utilize the standard toolbar, supplementary toolbar and format toolbar to create, save, format, preview and print a report.
- 2.3. you insert text objects along with database fields, lines and boxes on report using the free form placement, snap to grid and guideline features.
- 2.4. you change attributes of fields.

#### Learning Objectives

- 2.a. Identify the elements of the Crystal Reports interface
- 2.b. Link to a data source
- 2.c. Add objects on a report
- 2.d. Format objects
- 2.e. Modify existing reports
- 2.f. Import pre-formatted data

### 3. Format reports.

#### Assessment Strategies

- 3.1. Lab
- 3.2. Application Test
- 3.3. Project

#### Criteria

*You will know you are successful when*

- 3.1. you apply special formatting to report such as fractional fonts, accounting conventions, number, date/time, vertical text, paragraph, and character spacing.

- 3.2. you add and format special fields, lines, boxes, hyperlinks and pictures within a report.
- 3.3. you format elements of a field or text object and combines text objects with database fields.
- 3.4. you create a report with alerts.

#### **Learning Objectives**

- 3.a. Apply specialized formatting to objects
- 3.b. Import pre-formatted data
- 3.c. Use special fields on report
- 3.d. Add lines, boxes, hyperlinks, and pictures to report
- 3.e. Combine text objects with database objects and special fields
- 3.f. Utilize highlighting expert feature
- 3.g. Format data conditionally
- 3.h. Create report alerts
- 3.i. Utilize the section expert to format sections

### **4. Extract records.**

#### **Assessment Strategies**

- 4.1. Lab
- 4.2. Application Test
- 4.3. Project

#### **Criteria**

*You will know you are successful when*

- 4.1. you build selection criteria to restrict records in a report.
- 4.2. you utilize static and dynamic parameters in report.

#### **Learning Objectives**

- 4.a. Define the criteria for record selection
- 4.b. Apply record selection to restrict the results of a database request
- 4.c. Utilize static and dynamic parameters on report

### **5. Link tables.**

#### **Assessment Strategies**

- 5.1. Lab
- 5.2. Application Test
- 5.3. Project

#### **Criteria**

*You will know you are successful when*

- 5.1. you link multiple tables and databases together on one report.
- 5.2. you apply Crystal Reports' smart linking feature to link fields in two tables.
- 5.3. you establish correct join type between tables.

#### **Learning Objectives**

- 5.a. Define linking concepts
- 5.b. Add and remove databases from a report
- 5.c. Apply Crystal Reports' Smart Linking
- 5.d. Change join type between tables

### **6. Summarize data.**

#### **Assessment Strategies**

- 6.1. Lab
- 6.2. Application Test
- 6.3. Project

#### **Criteria**

*You will know you are successful when*

- 6.1. you sort data.
- 6.2. you summarize data into meaningful groups.
- 6.3. you create totals on report using the summarize, subtotal, grand total and formula features in Crystal

Report Writer.

### Learning Objectives

- 6.a. Apply specified order grouping
- 6.b. Create nested or multiple groups
- 6.c. Modify groups
- 6.d. Locate the top and bottom performers in your data set
- 6.e. Create a group sort based on summary information
- 6.f. Group on a date or date/time field
- 6.g. Create totals using the summarize, subtotal and grand total features

## 7. Create formula fields.

### Assessment Strategies

- 7.1. Lab
- 7.2. Application Test

### Criteria

*You will know you are successful when*

- 7.1. you create and modify a formula field.
- 7.2. you declare a variable in a formula field.
- 7.3. you create an IF...Then expression that utilizes declared variables.
- 7.4. you create a formula field with nested functions.
- 7.5. you use an Evaluation Time function in a formula field.

### Learning Objectives

- 7.a. Explore the formula workshop
- 7.b. Create simple formulas using Date and Time, String, and Mathematical functions
- 7.c. Create complex formulas by using variables, arrays, and ranges
- 7.d. Create formulas by using multiple functions and Evaluation Time

## 8. Create cross-tab reports.

### Assessment Strategies

- 8.1. Lab
- 8.2. Application Test
- 8.3. Project

### Criteria

*You will know you are successful when*

- 8.1. you create cross-tab reports.
- 8.2. you format cross-tab reports.
- 8.3. you add a chart to cross-tab reports.

### Learning Objectives

- 8.a. Create cross-tab report using the wizard
- 8.b. Format cross-tab report
- 8.c. Chart on a cross-tab summary field

## 9. Incorporate charts.

### Assessment Strategies

- 9.1. Skill Demonstration
- 9.2. Lab
- 9.3. Application Test
- 9.4. Project

### Criteria

*You will know you are successful when*

- 9.1. you can drill down on a chart to display the details behind summary information.
- 9.2. you create charts based on detail, formula, and summary data.
- 9.3. you customize chart using the Chart Expert and Analyzer.

### **Learning Objectives**

- 9.a. Utilize the chart expert
- 9.b. Examine data in chart through drill down feature
- 9.c. Create advanced charts using detail, formula, and summary data
- 9.d. Customize a chart

## **10. Create geographical map.**

### **Assessment Strategies**

- 10.1. Lab

### **Criteria**

*You will know you are successful when*

- 10.1. you create geographical map based on data.
- 10.2. you resolve data mismatches in a map.

### **Learning Objectives**

- 10.a. Define mapping concepts
- 10.b. Create maps based on formulas, detail and summarized data
- 10.c. Modify map
- 10.d. Determine mismatches between data sets

## **11. Distribute reports.**

### **Assessment Strategies**

- 11.1. Lab

### **Criteria**

*You will know you are successful when*

- 11.1. you use report distribution options.
- 11.2. you export Crystal reports to different file formats.

### **Learning Objectives**

- 11.a. Describe report distribution options
- 11.b. Give report to users through report distribution
- 11.c. Utilize export formats