COURSE SYLLABUS

COURSE TITLE: **50596A Dashboards for Monitoring, Analyzing, and Managing**

FORMAT: Instructor-led

CERTIFICATION EXAMS: None

This course syllabus should be used to determine whether the course is appropriate for the students, based on their current skills and technical training needs. Course content, prices, and availability are subject to change without notice.

ELEMENTS OF THIS SYLLABUS ARE SUBJECT TO CHANGE.

ABOUT THE COURSE

This three-day instructor-led course is designed to empower the students to effectively design web-based dashboards by utilizing the three main tools for dashboard building in the Microsoft tool set. Report Builder 3.0 from SQL Reporting Services, Dashboard Designer from PerformancePoint Services and SharePoint Designer. In using each of these tools you gain the best of breed to combine features and develop dashboards that are highly effective for monitoring, analyzing and managing your business.

This course is lab intensive. You should expect to spend over 60% of the course time in labs. Modules 1-6 will ground your skills. Modules 7-9 have the instructor walk through a scenario then you will do three separate scenarios and finish by presenting your dashboard from scenario 3 to the class. Scenario 1 is guided in the lab, scenario 2 is semi-guided and scenario 3 is not guided.

AUDIENCE

The goal of creating effective dashboards is a collaborative team effort. This course is intended for that team.

- The **project manager** to gain an understanding of best practices, follow a design methodology and gain an understanding of ineffective dashboard designs.
- The **business managers** so they can understand the input that they will need to provide to the project team and what they should expect back from these dashboards.
- **IT** as they manage the infrastructure.
- **Report builders**' so their designs can be effectively presented to the report consumer.
- **Business intelligence/SQL personnel** as it is their data that is displayed and analyzed.

This course utilizes the tools in such a manner that we do not expect the students to have developer level skills.

AT COURSE COMPLETION

After completing this course, students will be able to:

- Utilize the dashboard development methodology.
- Optimize visual design of dashboards.
- Structure dashboards hierarchies.
- Understand the basics of data visualizations.
- List the thirteen crucial errors in dashboard design.
- Implement user menus in scorecards.
- Understand how to connect into multiple data sources.
- Gain familiarity with the definitions of common business intelligence terms.
- Learn the methodology for connecting into and displaying near-real-time data.

- Create parameterized reports.
- Create subreports.
- Create map based reports.
- Use the decomposition tool in PerformancePoint Services.
- Connect together SharePoint components into PerformancePoint components.
- Use Report Parts as a library.
- Know when to use Report Builder, Dashboard Designer, and SharePoint Designer.
- Use and understand Report Builder 3.0.
- Use and understand Dashboard Designer from PerformancePoint Services.
- Use and understand SharePoint Designer for working with dashboards.
- Utilize Excel Services to share Excel workbooks.
- Design and implement KPIs.
- Understand the scoring methodologies used with indicators to change visual displays.
- Be able to develop proper filters for easy end-user click-to-detail on dashboards.
- Group scorecards into dashboards and link them together.
- Modify the webpage hosting the dashboards for branding.
- Implement master pages in dashboards for consistency with company standards.
- Develop multiple-valued KPIs. For example, this year actual and target, and last year actual and target at the same relative point in time.
- Implement Time Intelligence features to query such as year-to-date, last 6 months, etc.
- Develop filters for scorecards.
- Understand the implications of where a filter is applied.
- Create effective graphs.
- Create visual reports.
- Create effective gauges.
- Utilize sparklines in reports.
- Understand how to secure dashboards.
- Use dynamic hierarchies in dashboards.
- Implement user menus in dashboards.
- Create monitoring dashboards.
- Create analytical dashboards.
- Create management dashboards.

PREREQUISITES

Before attending this course, students must have:

- An understanding of the state of the data repository in their environment.

ADDITIONAL READING

To help you prepare for this class, review the following resources:

- Brian Larson, *Delivering Business Intelligence with Microsoft SQL Server 2008* (Columbus: The McGraw-Hill Companies, 2009)

MODULE 1: COURSE OVERVIEW

Lessons

- Introduction
- Course Materials
- Facilities
- Prerequisites
- What We'll Be Discussing

Lab 1: COURSE OVERVIEW

- None

MODULE 2: THE MICROSOFT BUSINESS INTELLIGENCE STACK TOOLS

Lessons

- SQL Analysis Services
- SQL Reporting Services
- SharePoint 2010 PerformancePoint Services
- SharePoint Business Intelligence Center
- Understanding the Terminology of Dashboards
- Report Builder 3.0
- Dashboard Designer
- SharePoint Designer

Lab 1: THE MICROSOFT BUSINESS INTELLIGENCE STACK TOOLS

- Explore SharePoint 2010 Business Intelligence Center

MODULE 3: DASHBOARD DESIGN PRINCIPLES

Lessons

- Dashboard Taxonomies
- Visual Perception
- Dashboard Design Flaws
- An Effective Dashboard Design Process
- Dashboard Hierarchy
- Dashboard Variance
- Dynamic Dashboards
- Dashboard Interactivity
- Develop Multiple Dashboards
- Change Deployed Dashboards
- Provide Interactive Help for Your Dashboards
- Monitor Dashboard Utilization
- Control Dashboard Updates

Lab 1: DASHBOARD DESIGN PRINCIPLES

- Group Paper Lab Using Scenarios

MODULE 4: REPORT BUILDER 3.0

Lessons

- Report Builder Interface
- Data Connections
- Graphs
- Gauges
- Parameterized Reports
- Report Parts
- Mapping Reports

Lab 1: REPORT BUILDER 3.0

- Data Connections
- Graphs
- Gauges
- Parameterized Reports
- Report Parts
- Mapping Reports

MODULE 5: DASHBOARD DESIGNER

Lessons

- Dashboard Designer Interface
- Key Performance Indicators (KPIs)
- Multivalued KPIs
- Objective KPIs
- Leaf KPIs
- Indicators
- Filters
- Scorecards (as containers)
- Connections
- Visual Reports (called graphs in Report Builder)
- Dashboards (here we mean the webpage)

Lab 1: DASHBOARD DESIGNER

- Create Data Connections
- Create Multiple Types of KPIs
- Create Visual Reports
- Create the Hosting Scorecard
- Deploy the Dashboard to SharePoint
- Create Filters

MODULE 6: SHAREPOINT DESIGNER

Lessons

- SharePoint Designer Interface
- Business Connectivity Services
- SharePoint Web Parts
- Using SharePoint Designer for Dashboard Refinement

Lab 1: SHAREPOINT DESIGNER

- SharePoint Designer Interface Familiarization
- Use Business Connectivity Services in a Dashboard
- Use SharePoint Web Parts in a Dashboard
- Using SharePoint Designer for Dashboard Refinement

MODULE 7: DASHBOARDS THAT MONITOR

Lessons

- Guidance Through Monitoring Dashboards
- Characteristics of Monitoring Dashboards
- Real-Time Monitoring
- Best Practices
- Instructor-Guided Project as Preparation for the Lab

Lab 1: DASHBOARDS THAT MONITOR

The students will walk through the creation of three dashboards based on scenarios.

- Scenario 1
- Scenario 2
- Scenario 3
- Students Presentation to the Group

MODULE 8: DASHBOARDS THAT ANALYZE

Lessons

- Guidance Through Analytical Dashboards
- Characteristics of Analytical Dashboards

- Best Practices
- Instructor-Guided Project as Preparation for the Lab

Lab 1: DASHBOARDS THAT ANALYZE

- Scenario 1
- Scenario 2
- Scenario 3
- Students Presentation to the Group

MODULE 9: DASHBOARDS FOR MANAGEMENT STRATEGY

Lessons

- Guidance Through Management Dashboards
- Characteristics of Management Dashboards
- Best Practices
- Instructor-Guided Project as Preparation for the Lab

Lab 1: DASHBOARDS FOR MANAGEMENT STRATEGY

- Scenario 1
- Scenario 2
- Scenario 3
- Students Presentation to the Group

MODULE 10: CUSTOM REPORTS AND GRAPHS USING MDX (OPTIONAL)

Lessons

- What is MDX?
- MDX Query Editor
- SELECT Statement
- Key Concepts
- Sets
- Functions
- Time Intelligence

Lab 1: CUSTOM REPORTS AND GRAPHS USING MDX (OPTIONAL)

- Examine What MDX Can Add to the Reporting Environment