



**Dillard College of Business Administration**

***Syllabus: Independent Study in Economics – SAS Certification Preparation***  
**ECON 4553, Section 101**  
**Fall Semester 2020**  
**Wednesday 7:00 pm – 8:30 pm**

***CONTACT INFORMATION:***

**INSTRUCTOR:** Dr. John E. Martinez  
**OFFICE BLDG:** Dillard College, Second Floor, Room 255  
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**OFFICE HOURS:** 3:30 am to 4:30 pm Tuesday and Thursday via D2L  
2:00 pm to 3:30 pm Monday and Wednesday via D2L,  
or by appointment.

ZOOM Link:

<https://msutexas-edu.zoom.us/j/94299836741>

**SYLLABUS CHANGE POLICY:**

This syllabus is a guide for the course and is subject to change. All changes will be announced in class and students will be responsible for incorporating the changes into the syllabus. If, at some point, the university switches to an online format, there will be significant changes in the way future exams are administered. In that case, it will be necessary for students to have access to a webcam. Any exam taken online will be monitored through RESPONDUS.

**COURSE MATERIALS:**

**SAS® Certification Prep Guide: Base Programming for SAS®9, Third Edition**  
Copyright © 2011, SAS Institute Inc., Cary, NC, USA ISBN 978-1-60764-924-3

***Other Requirements:*** Access to SAS windowing environment.

**COURSE DESCRIPTION:**

The course is a test preparation document that uses the following environments and products:

- SAS Certification Prep Guide: Base Programming for SAS®9
- SAS windowing environment

***OBJECTIVES:*** To Prepare for Certification in SAS Base Programming for SAS ®9

**LEARNING GOALS:**

***General Learning Goals:***

Upon successful completion of this course, the student should have a fundamental understanding of SAS Base Programming

**Course Specific Learning Goals:**

Learn how to import data, create and modify SAS data sets  
 Learn how to identify and correct data syntax and programming logic errors.  
 Learn to Produce Descriptive Statistics and Create Reports  
 Learn to use Functions to Manipulate Data

**Assessment:**

Quizzes found in the Prep Guide will be used to assess attainment of learning goals.

**COURSE POLICIES:****A. Attendance Policy:**

Students are expected to attend all class meetings for this course.

**B. Other Related Policies****GRADING and EVALUATIONS:**

A student's grade will be based on one of the following:

<i>Grade Breakdown</i>	<i>%</i>	<i>Points</i>
Chapter Quizzes	100%	100

**GRADE EVALUATION:**

Quizzes: The Prep Guide has a multiple choice quiz at the end of each chapter. A form for answers will be distributed to students for each chapter quiz. The answers should then be emailed to instructor. Each quiz may be taken three times with each chapter quiz grade based on the top two scores. Of the 16 quizzes provided in the text, students are responsible for taking 12 of those quizzes. Your grade will be determined as a percent of questions answered correctly: A (Above 90%), B (80-89), C (70-79), D (60-69), F (below 60).

**Requirements and Details****Exam Objectives and Updates to This Book**

The current exam objectives and a list of any updates to this book are available at [www.sas.com/certify](http://www.sas.com/certify). Exam objectives are subject to change.

**Registering for the Exam**

It is the student's responsibility to register for the SAS Base Programming SAS®9 exam. See the SAS Global Certification website at [www.sas.com/certify](http://www.sas.com/certify).

**Contents - How to Prepare for the SAS Base Programming for SAS®9 Exam  
 Accessibility Features of the SAS Certification Prep Guide**

**Introduction****Week 1 Aug 26****Chapter 1 • Setting Up Practice Data****Week 2 Sep 2**

Accessing Your Practice Data

**Chapter 2 • Basic Concepts**

Getting Started

The Basics of the SAS Language

SAS Libraries

Referencing SAS Files

SAS Data Sets  
**Chapter Quiz**

**Week 3 Sep 9**

**Chapter 3 • Accessing Your Data**

SAS Libraries  
Viewing SAS Libraries  
**Chapter Quiz**

**Week 3 Sep 9**

**Chapter 4 • Creating SAS Data Sets**

Referencing an External Data File  
The IMPORT Procedure  
Reading and Verifying Data  
Using the Imported Data in a DATA Step  
Reading a Single SAS Data Set to Create Another  
Reading Microsoft Excel Data with the XLSX Engine  
Creating Excel Worksheets  
Writing Observations Explicitly  
**Chapter Quiz**

**Week 4 Sep 16**

**Chapter 5 • Identifying and Correcting SAS Language Errors**

Error Messages  
Correcting Common Errors  
**Chapter Quiz**

**Week 5 Sep 23**

**Chapter 6 • Creating Reports**

Creating a Basic Report  
Selecting Variables  
Identifying Observations  
Sorting Data  
Generating Column Totals  
Specifying Titles and Footnotes in Procedure Output  
Assigning Descriptive Labels  
Using Permanently Assigned Labels  
**Chapter Quiz**

**Week 6 Sep 30**

**Chapter 7 • Understanding DATA Step Processing**

How SAS Processes Programs  
Compilation Phase  
Execution Phase  
Debugging a DATA Step  
Testing Your Programs  
**Chapter Quiz**

**Week 7 Oct 7**

**Chapter 8 • BY-Group Processing**

Definitions  
Preprocessing Data  
FIRST. and LAST. DATA Step Variables  
**Chapter Quiz**

**Week 8 Oct 14**

**Chapter 9 • Creating and Managing Variables**

Creating Variables

Modifying Variables

Specifying Lengths for Variables

Subsetting Data

**Chapter Quiz****Week 9 Oct 21****Chapter 10 • Combining SAS Data Sets**

How to Prepare Your Data Sets

Methods of Combining SAS Data Sets: The Basics

One-to-One Reading: Details

Concatenating: Details

Match-Merging: Details

Match-Merge Processing

Renaming Variables

Excluding Unmatched Observations

**Chapter Quiz****Week 10 Oct 28****Chapter 11 • Processing Data with DO Loops**

The Basics of DO Loops

Constructing DO Loops

Nesting DO Loops

Iteratively Processing Observations from a Data Set

Conditionally Executing DO Loops

**Chapter Quiz****Week 11 Nov 4****Chapter 12 • SAS Formats and Informats**

Applying SAS Formats and Informats

The FORMAT Procedure

Defining a Unique Format

Associating User-Defined Formats with Variables

**Chapter Quiz****Week 12 Nov 11****Chapter 13 • SAS Date, Time, and Datetime Values**

SAS Date and Time Values

Reading Dates and Times with Informats

Example: Using Dates and Times in Calculations

Displaying Date and Time Values with Formats

**Chapter Quiz****Week 13 Nov 18****Thanksgiving Break Nov 25****Chapter 14 • Using Functions to Manipulate Data**

The Basics of SAS Functions

SAS Functions Syntax

Converting Data with Functions

Manipulating SAS Date Values with Functions  
Modifying Character Values with Functions  
Modifying Numeric Values with Functions  
Nesting SAS Functions  
**Chapter Quiz**

**Week 14 Dec 2**

**Chapter 15 • Producing Descriptive Statistics**  
The MEANS Procedure  
The FREQ Procedure  
**Chapter Quiz**

**Week 15 Dec 9**

**Chapter 16 • Creating Output**  
The Output Delivery System (ODS)  
Creating HTML Output with ODS  
Creating PDF Output with ODS  
Creating RTF Output with ODS  
Creating EXCEL Output with ODS  
**Chapter Quiz**

**Week 15 Dec 9**