COURSE INFORMATION

Course Number: BAPP 6195

Course Title: SAS Intermediate Programming: Macro Facility

Course Description: This course is for experienced SAS programmers who want to expand their programming skills with the use of the macro facility.

Suggested Course Prerequisite: SAS Programming Fundamentals or have equivalent experience. Specifically, you should be able to:
- Use a DATA step to read from or write to a SAS data set or external file
- Use SET and MERGE statements
- Use DATA step programming statements such as IF-THEN/ELSE, DO WHILE, DO UNTIL, and iterative DO
- Use SAS data set options such as DROP=, KEEP=, and OBS=
- Use character functions such as SUBSTR, SCAN, INDEX, PUT, and UPCASE
- Form subsets of data using the WHERE clause
- Create and use SAS date values and constants
- Use SAS procedures such as SORT, PRINT, CONTENTS, MEANS, and FREQ

Course Resources: N/A

Student Learning Outcomes: Upon completion, you will be able to:
- Define and use user macro variables
- Define and call a macro program with parameters
- Describe what the macro processor does and how it interfaces with the compiler
- Write macro programs that use conditional and iterative processing
- Create macro variables in a data step or PROC SQL
- Use macro language functions
- Understand global vs. local variables
- Understand %INCLUDE and AUTOCALL facilities

Certification Notes: N/A

Next course recommendation: SAS Intermediate Programming: the SQL procedure

Refund Policy: Please refer to www.collin.edu/ce/inforegistrar.html for our refund policy. No refunds after the start time of the first class.

Americans with Disabilities Act: Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal opportunity. It is the student’s responsibility to contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current Collin Student Handbook for additional information.

Course Sessions: Listed are guidelines to indicate all topics that will be covered during your course. Do not plan your personal calendar based on these sessions. Your instructor will give
you a calendar for your class that will indicate specific topics, assignments, and days.

Lesson Plan – by week or session:
Introduction to macros
- Purpose of the macro facility
- Program flow

Macro Variables
- Introduction to macro variables
- Automatic macro variables
- Macro variable references
- User-defined macro variables
- Delimiting macro variable references

Macro Definitions
- Defining and calling a macro
- Macro parameters

Under the covers
- The word scanner
- The macro processor

Macro Programs
- Conditional processing
- Iterative processing
- Global and local symbol tables

Macro Language functions
- SAS functions vs. macro functions
- Character functions
- Evaluation functions
- %SYSFUNC

DATA Step and SQL Interfaces
- Creating macro variables in the DATA step
- Creating macro variables in SQL

Source Libraries
- %INCLUDE
- AUTOCALL

Method of Evaluation: Unless otherwise stated, course completion is evaluated on the basis of attendance. Students must be in attendance 90% of each course in a certificate series for successful completion and to earn a certificate as specified.