The following is a list of workshops that have been offered in the past. If you do not see a current offering for a particular topic feel free to contact the CSCAR front desk at (734) 764-7828 or email cscar@umich.edu to make a request.

**DETERMINING SUFFICIENT SAMPLE SIZE**
This workshop outlines how to calculate an appropriate sample size (n) to address the objectives of a research project. Participants will be led through essential steps for the design of a study: specifying the outcome variable, outlining hypothesis tests, estimating the variance or other "nuisance parameters," determining power to detect particular differences, and balancing these considerations against cost to arrive at a final sample size.

**INTRODUCTION TO SPSS**
This workshop is designed to introduce participants to SPSS for Windows. It will cover the fundamentals of SPSS, within-case transformations, data management with multiple files, and basic statistics and graphics. Useful for any scholar engaged in quantitative research.

**INTRODUCTION TO STATA**
This workshop introduces participants to the use of Stata for Windows. After an introduction to the fundamentals of the Stata environment, the workshop introduces importing and entering data, managing data sets, performing statistical analyses (including descriptive analysis, hypothesis testing, regression analysis, and analysis of survey data), and graphing tools within Stata.

**STATISTICS: A REVIEW**
This workshop is a one-day intensive review of common statistical methods of design, measurement, analysis and presentation of scientific investigations. The workshop is designed for any scholar engaged in quantitative research.

**INTRODUCTION TO SAS**
This workshop is designed to introduce participants to SAS for Windows. It will cover the fundamentals of SAS, transformations and recodes, data management, basic graphics, and importing/exporting data.

**REGRESSION ANALYSIS**
The Regression Analysis Workshop will present an overview of issues in linear regression, including interpretation of parameter estimates, dummy variables in regression, the use and interpretation of interaction terms, model selection methods, detecting and dealing with collinearity, and graphical methods for assessing the appropriateness of the regression model.
INTRODUCTION TO SURVEY DESIGN: DATA COLLECTION AND QUESTIONNAIRE DESIGN
This workshop will present an overview of available modes and methods of survey data collection as well as an introduction to the survey response process and implications for questionnaire design. Participants will gain an appreciation of the tradeoffs inherent in survey design decisions and how design can affect data quality and survey errors.

INTRODUCTION TO NVivo
Instructors: Giselle Kolenic
This workshop is designed for scholars engaged in using NVivo for their qualitative data analysis projects. It will provide an introduction to the key components of NVivo projects including documents, cases, memos, annotations, nodes, sets, attributes, and queries.

INTERMEDIATE SAS
Topics such as arrays, leads and lags, and complex merges will be discussed and practiced during this workshop.

INTRODUCTION TO PROGRAMMING IN STATA
This workshop introduces participants to programming in Stata. The workshop will cover many of Stata’s commands designed to make repetitive tasks easier – in both an interactive and a program setting. Concepts such as indexing, looping and macros will be addressed. The course will also focus on the creation of .do files and .ado files through many hands-on exercises.

APPLICATIONS OF HIERARCHICAL LINEAR MODELS
This workshop introduces the analysis of multilevel and longitudinal data, emphasizing the use of hierarchical linear models (HLM). Participants will be introduced to the use of HLM 6.0 software. The workshop will consist of lectures including several hands-on examples using HLM software.

STATISTICAL ANALYSIS WITH R
R is a free and open source environment for data analysis and statistical computing. While R contains many built-in statistical procedures, the most unique feature of R is the facility for users to extend these procedures to suit their own needs. Excellent graphics are another reason R is gaining wide popularity.

ISSUES IN ANALYSIS OF COMPLEX SAMPLE SURVEY DATA
This workshop will provide participants with an introductory, hands-on overview of issues frequently encountered when conducting secondary computer analyses of survey data collected from samples with complex, multi-stage designs (e.g., PSID, NHANES, NCS), including design-based weight determination, software choice, and proper analysis methods. The workshop is not intended for participants looking to design a survey, but rather for participants who have a desire to analyze complex sample survey data.

CLASSIFICATION AND REGRESSION TREES USING JMP
This workshop will introduce the theory and application of techniques commonly used in the mining of large datasets. The course will include an introductory lecture section, followed by several real-world examples using SAS JMP.

APPLIED STRUCTURAL EQUATION MODELING
This workshop is designed to help participants develop skills in defining, estimating and testing plausible structural equation modeling. Attention will be paid to SEM submodels path analysis and confirmatory factor analysis as well as full models. This workshop is intended to be an introduction to structural equation modeling.

INTERMEDIATE TOPICS IN SPSS: DATA MANAGEMENT AND MACROS
This workshop is a companion workshop with “Intermediate Topics in SPSS: Advanced Statistical Models” and is designed to provide experienced SPSS users with hands-on exposure to more advanced topics in managing data and writing syntax in SPSS. Participants can register for one or both of the workshops. Both workshops will be conducted using SPSS for Windows.
INTERMEDIATE TOPICS IN SPSS: ADVANCED STATISTICAL MODELS
This workshop is a companion workshop with “Intermediate Topics in SPSS: Data Management and Macros” and is designed to provide experienced SPSS users with exposure to more advanced statistical modeling techniques implemented in SPSS, including linear mixed models. Participants can register for one or both of the workshops. The workshop will be conducted using SPSS for Windows.

RANDOMIZED CONTROLLED TRIALS: Scientific and Ethical Principles
The purpose of this workshop is to present an elaboration of a checklist of items that need to be considered to ensure that RCTs meet the highest scientific and ethical standards. The scientific items are from the CONSORT Statement (Consolidated Standards of Reporting Trials), a set of principles that have been adopted by a number of editorial boards and medical journals, including the Journal of the American Medical Association, Lancet, and the British Medical Journal. The ASSERT Statement (Assuring Ethical Randomized Trials) adds criteria for the ethical conduct of RCTs.

EXPLORATORY FACTOR ANALYSIS AND RELATED TECHNIQUES
This workshop and the companion workshop (Logistic Regression and Related Techniques) are designed to help participants understand selected multivariate procedures, and carry them out using the statistical software SPSS. This workshop introduces factor analysis, non-metric multidimensional scaling, cluster analysis, reliability analysis, and confirmatory factor analysis.

LOGISTIC REGRESSION AND RELATED TECHNIQUES
This workshop and the companion workshop (Dimension Reduction: Factor Analysis, Non-metric Multidimensional Scaling, and Cluster Analysis on May 2) are designed to teach participants a) about the logical and statistical basis for a set of techniques and b) how to carry out the analysis using the statistical software SPSS/PASW®. This workshop introduces logistic regression, log-linear analysis, and similar related techniques.

COMPARATIVE STUDIES: MATCHING, ADJUSTMENT, AND PROPENSITY SCORES
This workshop surveys some effective strategies for planning and implementation of observational studies, highlighting established principles of design and analysis, current doctrines on the use of human subjects in research, and recent analytic advances from Statistics. It also includes an overview of matching and adjustment techniques in an observational study, but devotes special attention to a statistical tool called the propensity score.

INTRODUCTION TO PROC MIXED
This workshop is designed to introduce participants to Proc Mixed procedure in SAS, as it is used for mixed model ANOVA, clustered data, longitudinal analysis and repeated measures.

APPLIED SURVIVAL ANALYSIS
This workshop, held over two days, covers basic concepts of and common analytical approaches for time-to-event data, known variously as survival analysis (in biological and medical sciences), event history analysis (in social sciences), or reliability analysis (in engineering).

TEXT MINING WITH COMMON DIGITAL DOCUMENTS
This workshop introduces the possibilities for using quantitative methods to study documents that are typically treated only qualitatively, such as novels, newspaper articles, judicial opinions, and web pages. These statistical methods will facilitate the formulation and exploration of research questions arising from studies of digitized but untagged texts. No prerequisites are required. No previous experiences with text analyses and/or statistical analyses are assumed.

EXPLORING SPATIAL STATISTICS IN GIS
This one-day session will provide a complete introduction to the principles and methods of spatial statistics in ArcGIS, a leading software package for working with geospatial data. Participants will learn how to use spatial statistics tools included with ArcGIS 9 to explore and measure spatial processes, distributions, and relationships. Topics and demonstrations include spatial statistical theories and techniques such as spatial autocorrelation, interpolation, measuring
geographic distributions, cluster and hot spot analysis, regression and more. The workshop includes lectures, demonstrations, and hands-on exercises using the spatial statistics tools with the latest ArcGIS software package.

HEALTH MEASUREMENT: STRUCTURE, VALIDITY, RELIABILITY, AND RESPONSIVENESS
This workshop will cover in detail the validity, reliability, and responsiveness of measurement. Measurement from the perspectives of factor analysis and structural equation modeling will also be discussed.

MULTIVARIATE TECHNIQUES – Logistic Regression and Related Techniques
This workshop and the companion workshop (Multivariate Techniques – Data Reduction) are designed to help participants understand selected multivariate procedures, and carry them out using the statistical software SPSS®. This workshop introduces logistic regression, log-linear analysis, and similar related techniques.

MULTIVARIATE TECHNIQUES – Data Reduction
This workshop and the companion workshop (Multivariate Techniques – Logistic Regression and related techniques) are designed to help participants understand selected multivariate procedures, and carry them out using the statistical software SPSS®. This workshop introduces factor analysis, non-metric multidimensional scaling, and cluster analysis.

META-ANALYSIS
This one-day workshop will examine a variety of information resources, leading to a comprehensive review of the literature. It will also cover specific strategies for searching major databases such as MEDLINE/PubMed and Web of Knowledge (Science and Social Science Citation Indexes). Another segment of the workshop will discuss measurement issues, summarizing studies in terms of study design, participants studied, outcome measures and their standard errors, and the use of covariates.