Dear University of Florida Faculty, Residents and Fellows:

We are pleased to announce the Spring 2011 Research/Biostatistics Course offered by the Center for Health Equity and Quality Research (CHEQR). The lecture series outline is detailed below. Please note that each lecture is independent of the others.

In addition to the Research/Biostatistics Course, there will be SPSS learner's group "follow-up" session immediately after the topic covered by the Research/Biostatistical Course.

Please register for each lecture by calling Mark Farfard at 244-9270 or email at mark.farfard@jax.ufl.edu. The lectures will run from **12 Noon to 1:00 PM** and are scheduled as follows:

Friday, April 1, 2011- Dogwood Room
Friday, April 8, 2011-Dogwood Room
Friday, April 15, 2011-Dogwood Room
Friday, April 22, 2011- Ash Room
Friday, April 29, 2011-Dogwood Room
Friday, May 6, 2011-Dogwood Room
Friday, May 13, 2011-Ash Room
Friday, May 20, 2011-Dogwood Room
Friday, May 27, 2011-Deal Boardroom
Friday, June 3, 2011-Dogwood Room
Friday, June 10, 2011-Dogwood Room
Friday, June 17, 2011-Dogwood Room
Friday, June 24, 2011-Dogwood Room

You are reminded that the ACGME requirements for all accredited programs in Graduate Medical Education include:

ACGME Common Program Requirements [*effective July 2007]*

Residents' Scholarly Activities

1. The curriculum must advance residents' knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.

2. Residents should participate in scholarly activity. [As further specified by the Review Committee]

3. The sponsoring institution and program should allocate adequate educational resources to facilitate resident involvement in scholarly activities. [As further specified by the Review Committee]

Go to http://www.acgme.org/ for the complete text.

The Center for Health Equity and Quality Research (CHEQR) offers biostatistical consulting and research support services to faculty, residents, fellows and other researchers. CHEQR particular area of interest is health disparities/health equity, but CHEQR does offer consultative services for research that is not specifically focused on health disparities/health equity. For more information, please refer to the CHEQR website at http://www.hscj.ufl.edu/cheqr/. It is strongly encouraged for all of our researchers to attend the lecture series and to take full advantage of the consulting services.

CHEQR Research/Biostatistics Course
SPRING 2011

Date	Week	Location	Research/Biostatistical Course Topic(s) Noon-1pm	SPSS Learners Group topic(s) 1PM-2PM
4/1/11	Lecture 1	Dogwood	Evidence-based medicine	
4/8/11	Lecture 2	Dogwood	Study Design 1 (Observational Studies)	
4/15/11	Lecture 3	Dogwood	Study Design 2 (Clinical Trials)	
4/22/11	Lecture 4	Ash	Data Exploration	Getting Started Using SPSS Software & Modifying Data Values
4/29/11	Lecture 5	Dogwood	Sampling, Estimation and Hypothesis Testing	Summary Measures for Individual Data
5/6/11	Lecture 6	Dogwood	Analysis of Numerical Data	Correlation, t-test, Wilcoxon Signed Ranks Test
5/13/11	Lecture 7	Ash	Analysis of Categorical Data	Chi-Square, Cochran's Q, Cramer's V or Phi Friedman's Test, Kruskal-Wallis, Spearman's Correlation
5/20/11	Lecture 8	Dogwood	Correlation and Association (Bi-variable Analysis)	Two Independent Samples T-Test, Wilcoxon Rank Sum Test, ANOVA, Kruskal–Wallis test, Two-Way ANOVA, Repeated Measures ANOVA
5/27/11	Lecture 9	Deal Boardroom	Linear Regression Family (Anova)	Linear Regression
6/3/11	Lecture 10	Dogwood	Logistic Regression Family (Poisson)	Logistic Regression
6/10/11	Lecture 11	Dogwood	Bayesian Methods	
6/17/11	Lecture 12	Dogwood	Meta-Analysis	
6/24/11	Lecture 13	Dogwood	Diagnostic Tools and Assessing Agreement	

Highly Recommended Book: Medical Statistics at a Glance. Aviva Petrie & Caroline Sabin. Third Edition.

From April 22nd through June 3rd participants (or others not in the class) are invited to bring their laptops and stay for an SPSS Learners Group "follow-up session" on the topic covered in the Research/Biostatistical course.

Research/Biostatistical Course Topic(s)

Lecture 1: Evidence Based Medicine (Ch. 40)
Introduction to the role of statistics in clinical research; the utility of evidence based medicine

Lecture 2: Study Design 1 (Ch. 12 - 13)
Details of types of observational studies; outcome measures; interpretation of the results

Lecture 3: Study Design 2 (Ch.14 - 16)
Details of types of randomized clinical control trials and studies; outcome measures; interpretation of the results

Lecture 4: Data Exploration (Ch.1 - 9)
Collection of data; creation of databases; summary measures; normal vs. non-normal distributions

Lecture 5: Sampling, Estimation and Hypothesis Testing (Ch.10 - 11 & 17 - 18)
Statistics for samples and populations; point estimation; general structure of hypothesis testing

Lecture 6: Analysis of Numerical Data (Ch.19 - 22)
T, Z and P; multiple group comparisons

Lecture 7: Analysis of Categorical Data (Ch.23 - 25)
Proportions of multiple groups; rates; 2x2 tables

Lecture 8: Correlation and Association (Bi-variable Analysis) (Ch.25 - 26)
Correlation of continuous data and association of discrete data

Lecture 9: Linear Regression Family (Anova) (Ch.27 - 29)
Linear Regression analysis and interpretation; Specific case of regression: ANOVA

Lecture 10: Logistic Regression Family (Poisson) (Ch.30 – 31, 33)
Logistic Regression analysis and unique interpretation (odds ratios)

Lecture 11: Bayesian Methods (Ch.45)
Uses of; advantages and disadvantages

Lecture 12: Meta-Analysis (Ch.43)
Fundamentals of meta-analysis and when it is appropriate to use

Lecture 13: Diagnostic Tools and Assessing Agreement (Ch.38 – 39)
Positive and negative predictive values; Coen's Kappa; Bland and Atman statistics

SPSS Learners Group

Lecture 1: Getting Started Using SAS Software & Modifying Data Values

Reading IBM SPSS Statistics Data Files, Reading Data from Spreadsheets, Entering Data in SPSS, Defining Data, Creating a Categorical Variable from a Scale Variable, Creating New Variables, Sorting and Selecting Data

Lecture 2: Summary Measures for Individual Data

Summary Measures for Categorical Data, Summary Measures for Scale Variables, Creating and Editing Charts

Lecture 3: Which Test to Choose?

Statistical Tests for Nominal Data: Chi-Square Goodness-of-Fit, Chi-Square Independence, Cochran's Q, Cramer's V or Phi (Correlation for Nominal Data)

Statistical Tests for Ordinal Data: Friedman's Test, Kruskal-Wallis, Spearman's Correlation

Lecture 4: Which Test to Choose?

Pearson's Correlation Coefficient – Numerical Data:

One Group – Numerical Data: One Sample T-Test, Wilcoxon Signed Ranks Test

Two Related Groups – Numerical Data: Two Paired T-Test, Wilcoxon Signed Ranks Test

Lecture 5: Which Test to Choose?

Two Independent Groups – Numerical Data:

Two Independent Samples T-Test, Wilcoxon Rank Sum Test

More Than Two Groups – Numerical Data: One-Way Analysis of Variance (ANOVA), Kruskal – Wallis test, Two-Way Analysis of Variance (ANOVA)

Repeated Measures ANOVA – Numerical Data: Univariate Approach, Multivariate Approach

Lecture 6: Linear Regression

Simple Linear Regression &Multiple Linear Regression

Lecture 7: Logistic Regression

Simple Logistic Regression & Multiple Logistic Regression

Please call Mark Fafard at 244-9270 or e-mail at mark.fafard@jax.ufl.edu to register.