Course syllabus

**HUN 6812  Analytical Techniques in Nutritional Biochemistry**  (1 credit)

The HUN 6812 course is presented in a lecture/demonstration format. Appropriate current literature is also presented and discussed. A few tours to UF campus core facilities are included since a large campus provides a wealth of exposure to new technologies and methods.

The philosophy behind the course is that research in the nutritional sciences draws upon a wide variety of methodologies, hence exposure to the theory behind these methods and interpretation of the data obtained is important to appreciate the current literature.

Topics to be discussed during the semester are:

- Experimental Diet Preparation
- Tissue Preparation and Centrifugation
- Radio-isotopes
- Stable Isotopes
- Spectrophotometric Methods
- Chromatography
- Molecular Biology-Microarrays-Genomics
- Molecular Biology-Knockout models
- Electrophoresis and Western Analysis
- Cell Culture/Primary Cell Isolation
- Metabolomics
- Flow Cytometry/ELISA/Immune Function Assays
- Metabolic Capabilities of FSHN & CTSI

A textbook for the course that would be most helpful to you is:

The class will meet once per week.

Quizzes will be given at the end of class on the following weeks (January 27, February 17, March 10, March 31 and April 21). The final course grade will be based on the average of those five quizzes.

E-mail me (cousins@ufl.edu) or stop by my office FSHN 201 if you have questions. Office hours are by appointment.

Dr. Cousins
Spring 2014    Schedule of Topics

Hun 6812 Analytical Techniques in Nutritional Biochemistry

Week of:

January 13  Experimental Diets
January 20  Experimental Diets
January 27  Tissue Preparation, Centrifugation
February 3   Radio-Isotopes    Quiz
February 10  Stable Isotopes
February 17  Spectroscopy    Quiz
February 24  Chromatography

Spring Break

March 10  Molecular Biology/Genomics/Microarray Assays    Quiz
March 17  Molecular Biology/Knockout Mice
March 24  Electrophoresis/Western Blot
March 31  Cell Culture/Primary Cells    Quiz
April  7   Metabolomics
April 14  Flow Cytometry/ELISA
April 21  FSHN Metabolic Lab and CTSI Tour    Quiz