

## **Graduate Module Outline**

**Title:** Best practices for data processing, charting and presentation.

**Instructor:** Dr. Arumugam Thiagarajan

**Timing:** Summer 2013 (Registration in May, Completing in June/July) and  
Fall 2013 (Registration in September, Completing in October, November)

### **Module Description:**

This module is intended for research professionals (e.g., graduate students) engaged in performing scientific data analysis, processing and presentation. Data processing, charting and presentation techniques will be the three focus areas of this module. In data processing, topics on (i) proper data types, (ii) data structures, (iii) effective organization through tabulation and (iv) sorting for data analysis using MS Excel will be covered. In charting, the following topics will be presented; (i) plotting discrete and continuous variables, (ii) presenting appropriate statistical parameters and (iii) avoiding graphic junk in charts. In presentation section, (i) organization of topics, (ii) concepts of key points and avoiding overloading (iii) effective use of animation/charts and (iv) techniques on poster preparation will be discussed.

### **Delivery format:**

This module will be structured as follows:

Lectures and discussions on data processing: 2 hours.

Lectures and discussions on Charting: 2 hours.

Lectures and discussions on Presentation: 2 hours.

Class presentation on a specific research topic: 4 hours.

### **Course Evaluation Structure:**

Written quiz on data structures and charting : 50%.A presentation on selected research review topic: 50% (evaluation done through peers and the instructor).