Fall 2012

For further information please contact:

**Dr. Gareth James**
HOH 512

gareth@marshall.usc.edu
(213) 740-9696

**About the professor:**

Gareth James is a Professor of statistics and holds a PhD from Stanford University. He also holds a bachelor’s degree in finance. Since arriving at USC, Gareth has taught at all levels and in particular he has successfully taught the first year statistics class in the Marshall MBA core program for nine years. Gareth’s area of research expertise is in modern highly computational statistical methods such as those covered in this course with applications to problems in finance.

**objective**

Knowing how to implement modern statistical methods will give you an edge over less quantitatively competent MBAs

**why?**

To give students an understanding of modern non-linear statistical methods and how to apply them in real business situations.

**description**

This course aims to provide a very applied overview to such modern non-linear methods as Generalized Additive Models, Decision Trees, Boosting, Bagging, Neural Networks and Support Vector Machines as well as more classical linear approaches such as Logistic Regression, and Nearest Neighbors. We will cover all of these approaches in the context of Marketing, Finance and other important business decisions.

**why?**

Knowing how to implement modern statistical methods will give you an edge over less quantitatively competent MBAs

**concept**

- Modern statistical learning approaches
- Shrinkage methods
- Non-linear regression
- Tree methods

- Boosting and Bagging
- Support Vector Machines
- Statistical methods for Option Pricing
- Using the statistical software R
- Neural networks

**why?**

Knowing how to implement modern statistical methods will give you an edge over less quantitatively competent MBAs

**description**

This course aims to provide a very applied overview to such modern non-linear methods as Generalized Additive Models, Decision Trees, Boosting, Bagging, Neural Networks and Support Vector Machines as well as more classical linear approaches such as Logistic Regression, and Nearest Neighbors. We will cover all of these approaches in the context of Marketing, Finance and other important business decisions.