

## **ELEG 5273 – ELECTRONIC PACKAGING**

### **Credits and Contact Hours**

Three credit hours, 45 hours of instructor contact

### **Instructor's Name**

Simon S. Ang, PhD, PE, Professor of Electrical Engineering

### **Textbook**

Advanced Electronic Packaging 2nd Edition, 2006, Editor: Richard Ulrich and W. D. Brown

### **Specific Course Information**

- a. Catalog description  
An introductory treatment of electronic packaging, from single chip to multichip, including materials, substrates, electrical design, thermal design, mechanical design, package modeling and simulation, and processing considerations.
- b. Pre-requisites or co-requisites: ELEG 3214 or ELEG 3933 or Graduate Standings
- c. Required or Technical Elective: None

### **Specific Goals for the Course**

#### 1. Specific outcomes of instructions

This is an introductory course on various aspects of electronic packaging for engineering students.

#### 2. Indicate the student outcomes listed in Criterion 3 addressed by the course

- (e) Students are required to solve engineering problems related to electronic packaging.
- (1) Students are required to apply mathematics through differential equations in analyzing electronic packaging.

### **List of Topics**

1. Introduction and Overview of Microelectronic Packaging (2 classes)
2. Materials for Microelectronic Packaging (4 classes)
3. Processing Technologies (6 classes)
4. Electrical Considerations, Modeling, and Simulation (10 classes)
5. Thermal Considerations (8 classes)
6. Mechanical Design Considerations (8 classes)
7. Other selected topics (5 classes)