

## 12011 Calculus with Precalculus I (3)

### **Knowledge**

The students should review algebra and trigonometry: equations of lines, functions and graphs, exponents, squaring and cubing of binomials. Then should understand the notions related to exponents, factoring, functions, graphs, tangent lines, limits, continuity, derivatives and related rates.

Comprehension should understand the notions of implicit differentiation, higher order derivatives, applications to rates of change in science and business.

### **Application**

The main and most important application is to solve many different problems related to the subject.

### **Analysis**

Maximum and minimum values, critical numbers, Extreme Value Theorem, Mean Value Theorem.

### **Synthesis**

Should continue developing abstract thinking.

### **Evaluation**

Should complete homeworks, pass mid-term tests and a final exam.

### **Class Activities**

To solve problems in class and discuss theorems.

### **Out of class Activities**

To submit homework assignments.