

## COURSE SYLLABUS (2 Page)

**Course Number:** STAT 3128  
**Course Name:** Probability and Statistics for Engineers

**Credits and Contact Hours:** 3

**Instructor:** Staff

**Textbook:** Probability and Statistics, by Devore, 9<sup>th</sup> Edition (2016).  
Cengage Learning, Print ISBN: 9781305251809.

**Catalog Description:** An introduction to: probability theory; discrete and continuous random variables and their probability distributions; joint probability distributions; functions of random variables and their probability distributions; descriptive statistics; point and interval estimation; one and two sample hypothesis testing; quality control; one and two factor ANOVA; and regression. May not be taken for credit and for a grade if credit has been received for MATH 3122, STAT 2122, or STAT 3122.  
*Most Recently Offered (Day): Spring 2016, Fall 2015, Summer 2015*  
*Most Recently Offered (Evening): Summer 2014, Summer 2013, Summer 2012*

**Pre-Requisites/Co-Requisites:** MATH 2241

**Course is: Required (R)**

**Goals:** To develop student knowledge of statistics and probability with respect to areas important for engineering students, including probability theory

**Student Outcomes Addressed:**

- A. an ability to apply knowledge of mathematics, science, and engineering

**Course Topics:**

- Populations and Samples
- Probability
- Conditional Probability
- Independence
- Random Variables
- Discrete Probability Distributions
- Binomial and Poisson Probability Distributions
- Continuous Random Variables
- Normal Distribution
- Descriptive Statistics
- Joint Probability Distributions
- Point Estimation
- Large and Small Samples
- Confidence Intervals
- Hypothesis Testing for Mean
- Observed Significance Level
- Two-Sample Tests
- Simple Linear Regression