

Instructor:	Dr. John W. Sutherland	TA: Prasad S Shirodkar (Rm. 301)
Phone:	906-487-3395	487-3168
Fax:	906-487-2822	487-1822
email:	jwsuther@mtu.edu	psshirod@mtu.edu
Office Hours:	Open Door Policy	

**Topics**

Introduction

Review of Basic Statistics

Hypothesis Testing

Independent t-test -- comparison of two treatments

Paired t-test -- comparison of two treatments

Blocking & Randomization concepts

One-way ANOVA -- comparison of multiple treatments

Two-way ANOVA -- comparison of multiple treatments with blocking

Mathematical Model

Two-level factorial designs - geometric interpretation, effect calculation, identifying significant effects, mathematical model formulation

Two-level fractional factorial designs - generators, defining relation, linear combination of confounded effects, significant effects

Combining the results of fractional factorial designs

Response surfaces

Higher order designs

Regression

Response Surface Methodology

Computer Workshops

Case Studies

**Other**

Text: *Statistical Quality Design and Control, Contemporary Concepts and Methods*, Macmillan, Richard E. DeVor, T. H. "Phil" Chang, John W. Sutherland

Grade Determination:

25% Homework

15% Computer Workshops

25% Midterm Exam

35% Final

Grade Breakdown:

Class GPA - approx. 3.0

about 2/3 A's and B's