

STATISTICS 512, Fall 2014, MWF 10:00-10:50 am, Town Engineering, Room 0230

- **Instructor:**

Prof. Max Morris

Phone 515-294-2775, FAX 515-294-5040, mmorris@iastate.edu

Office hours: MW 11:00 - 11:50, T 10:30 - 11:20, 2103 Snedecor Hall

- **Prerequisite:** STAT 500 & STAT 510 (firm requirement)

- **Textbook:** *Design of Experiments: An Introduction Based on Linear Models*, Max Morris, 2010, Chapman & Hall, ISBN 978-1-58488-923-6.

- **Auxiliary texts** (not required) that contain relevant material include:

- *Design and Analysis of Experiments*, Angela Dean and Daniel Voss, 1999, Springer-Verlag, ISBN 0-387-98561-1
- *Experiments: Planning, Analysis, and Parameter Design Optimization*, 2nd edition, C.F. Jeff Wu and Michael S. Hamada, 2009, Wiley, ISBN 978-0-471-69946-0
- *Design and Analysis of Experiments*, any edition, Douglas G. Montgomery, Wiley.

- **Web Page:** <http://mmorris.public.iastate.edu/stat512/>

- **Approximate Syllabus:**

Topics	Approx. number of lectures
Introduction to Basic Ideas	1
Completely Randomized Designs, Linear Models Review	6
Complete Block and Related Designs	3
Latin Square and Related Designs	3
Some Analysis for CRDs and Orthogonal Blocks	1
Balanced Incomplete Block Designs	3
Random Block Effects	2
Factorial Treatment Structure	2
Split-Plot and Related Designs	3
Unblocked 2-level Factorial Experiments	4
Blocked 2-level Factorial Experiments	4
Regular 2-level Fractional Factorials	4
Irregular 2-level Fractional Factorials	2
General p -level Factorial Experiments	optional topic, if time allows
Overview of Response Surface Designs	optional topic, if time allows

- **Course Requirements:**

1. *Homework:* Semi-regular assignments will be made during the semester. Papers will generally be collected in class one week following the day on which the assignment is made. Some assignments will involve the use of statistical or other software.
2. *Quizzes:* Two closed-book in-class quizzes will be given during the semester.
3. *Final Exam:* A comprehensive closed-book exam will be given Wednesday, December 17, 9:45 - 11:45 am (tentative University schedule).

- **Likely Quiz Schedule:** October 3, November 7.

- **Grading System:**

Homework	15%	(of course grade)
Quizzes	2 × 25%	
Final	35%	

- **Academic Dishonesty:** “The class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office. <http://www.dso.iastate.edu/ja/academic/misconduct.html>.”
- **Disability Accommodation:** “Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact Dr. Morris to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Before meeting with Dr. Morris, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-7220 or email disabilityresources@iastate.edu . Retroactive requests for accommodations will not be honored.”
- **Dead Week:** “This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook <http://www.provost.iastate.edu/resources/faculty-handbook>.”
- **Harassment and Discrimination:** “Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon race, ethnicity, sex (including sexual assault), pregnancy, color, religion, national origin, physical or mental disability, age, marital status, sexual orientation, gender identity, genetic information, or status as a U.S. veteran. Any student who has concerns about such behavior should contact his/her instructor, Student Assistance at 515-294-1020 or email dso-sas@iastate.edu, or the Office of Equal Opportunity and Compliance at 515-294-7612.”
- **Religious Accommodation:** “If an academic or work requirement conflicts with your religious practices and/or observances, you may request reasonable accommodations. Your request must be in writing, and your instructor or supervisor will review the request. You or your instructor may also seek assistance from the Dean of Students Office or the Office of Equal Opportunity and Compliance.”
- **Contact Information:** “If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu.”