

Marshall University

MTH 425/525 – SEC 101: Sampling Designs and Estimation

CRN 3091/3110 – Fall 2015

Class Time: MWF 12:00 – 12:50 pm

Location: Smith Hall 437

(Tentative Syllabus)

INSTRUCTOR: Dr. Raid Al-Aqtash

OFFICE: (The Arthur Weisberg Family Applied Engineering Complex) WAEC 3231

OFFICE PHONE: 304-696-3044

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OFFICE HOURS: MWF 9:00 – 10:30 am, TR 11:00 am – 12:00 noon, others by appointment.

UNIVERSITY POLICIES: By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to

<http://www.marshall.edu/academic-affairs/policies/>

Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment. The most recent revision of the 2015-2016 undergraduate catalog can be obtained at

http://www.marshall.edu/catalog/files/UG_15-16_final_published.pdf

Academic Integrity:

- ✦ The University Rules, including the Code of Conduct, and other documented policies of the department, college, and university related to academic integrity, will be enforced. **Any violation of these regulations will be dealt with on an individual basis according to the severity of the misconduct.**
- ✦ Please note that **any act of Plagiarism, Cheating, or/and Academic Dishonesty** will be prosecuted to the maximum extent according to MU catalog.

CLASS RULES:

1. **SILENT YOUR PHONES.**
2. If you need to leave the class early, inform your instructor before the class begins. Please **show your respect** to your classmates and your instructor.
3. **Good attendance is a major key to success in this (or any) class!** Students are expected to attend all scheduled classes.

COURSE DESCRIPTION: coverage of the theory and applications of a variety of sampling designs; sample size determination; ratio and regression estimates; comparisons among designs.

PREREQUISITES: MTH326 or permission of instructor.

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES: The table below shows the following relationships: How each student learning outcomes will be practiced and assessed in the course:

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Course Student Learning Outcomes	How students will practice each outcome in this Course	How student achievement of each outcome will be assessed in this Course
Students will identify the elements of the sampling problem.	Homework	Homework and Exams
Students will summarize different types of sampling designs.	Homework	Homework, Quizzes and Exams
Students will be introduced to applications of real-life phenomena.	Homework	Homework, Quizzes and Exams
Students will design a survey to study a real-life phenomenon.	Homework	Final Project

TEXT: Elementary Survey Sampling, 7th Edition, 2011, by Scheaffer, Mendenhall, Ott, & Gerow.

REFERENCES:

- *Sampling Techniques*, 1977, by Cochran.
- *Sampling Methods*, 2006, by Ardilly & Tille.
- *Analysis of Survey Data*, 2003, by Chambers & Skinner.
- *Survey Methodology*, 2nd Edition, 2009, by Groves, Fowler Jr., Couper, & Lepkowski.

GRADED WORK: (650 points)

1. Exams:

There will be one in-class midterm and a final exam. The final exam will be comprehensive. In case of extreme emergency, serious illness, or university related activity, when I have been notified with evidence or approval, or excused absences approved by the Dean of Student Affairs, the student will be allowed to make up the missed exam.

Midterm Exam: *Friday, October 16th, 2015* (100 points) ~ 15.4%
Final Project (TBD). Due *Friday, November 20th, 2015* (100 points) ~ 15.4%
Final Exam: *Friday, December 11th, 2015, 10:15 am – 12:15 p.m.* (150 points) ~ 23.1%

2. Quizzes, Classroom Activities, and Homework Assignment: (200 points) ~ 30.8%

3. ATTENDANCE (100 points) ~ 15.4%

Good attendance is a major key to success in this (or any) class!

Attendance Policy:

- ✚ Students are expected to attend all scheduled classes. **I'll reserve the right to drop 2 points for each absence.** It is the student's responsibility to find out what was discussed in a missed class.
- ✚ **In case of an emergency, when I am notified ahead of time, or when the absence is excused by the office of the dean of affairs, a student will be allowed to makeup a missed work.**

Roughly speaking 90% is at least an A , 80% is at least a B, 70% is at least a C, 60% is at least a D. Final grades will be determined by the end of the semester.

DROP: The last day to drop class (no entry to academic record) is August 28th 2015.

Withdrawals: October 30th, 2015 is the last day to withdraw "W" from the class.

The complete academic calendar is available at

<https://www.marshall.edu/calendar/academic/fall2015.asp>

Blackboard / Electronic Communications:

Blackboard will be used to post pertinent class information and course documents. For technical problems with Blackboard contact IT Services Desk 304-696-3200.