MATH321 Analysis of Variance and Experimental Design Spring 2021

Section 0002
Credit hours: 3
Class dates: Jan 19 - May 6
Class meeting time and location:
TuTh 4:20-5:35 pm online
Student/Faculty assessment Day: 2/9, No class between 8am to 4 pm
Break Days (no class): 2/17,3/12, 4/8
Instructor: Lihua Chen


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Office:  Roop Hall 338   Office phone: 540-568-6533
Office hours:  TuTh 2:30-4:00 pm  W 1:00-3:00 pm  online

Email: CHEN3Lx@jmu.edu
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Text: course packet (written by Professor Rickie J. Domangue)
Course Website: All course materials will be posted in Canvas.
Goals of the Course:
Understand the principles of survey and experiments for gathering data.
Use confidence intervals and hypothesis tests to analyze data.
Use the analysis of variance method to analyze data.
Use statistical computer software to display, explore and analyze data.
Evaluations:

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Homeworks (5 percent)
Quizzes (20 percent)
Test 1 (20 percent): 2/25, Thursday
Test 2 (20 percent): 4/13, Tuesday

Final Exam (35 percent): 5/4 Tuesday 1:00 pm -3:00 pm
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Note your letter grade will depend on your overall weighted grade on homeworks, quizzes,
tests and the final exam. No extra credit assigments will be given upon individual request.
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Homework: Approximately one homework will be assigned for each chapter. Solutions to homework problems will be posted in Canvas. Some homework will involve use of R statistical software. You can download R from
https://www.r-project.org/
Grading policy:
Approximately 6 to 8 Quizzes will be given this sememster and quizzes may NOT be made up. The quiz time will be announced at least one day ahead so please check your jmu email at least once a day. Up to TWO quizzes with lowest scores may be dropped. Note one purpose of this policy is to take care of missed work due to excused absences. If you miss more than you are allowed to drop due to excused absences, please let me know and I will deal with this on an individual basis.

Exams:

The exam will be open book and open notes if it is given online. Make sure you have a laptop that you can use to take an online quiz or exam.

The final exam is cumulative.

Attendance:

Note attendance will be automatically taken for online zoom classes.

Adding/Dropping Classes

Students are responsible for registering for classes and for verifying their class schedules on e-campus. Please refer to

`https://www.jmu.edu/registrar/_files/deadlines-spring.pdf`

for deadlines for adding or dropping a class.

Disability Accommodations

If you need an accommodation based on the impact of a disability, you should contact the Office of Disability Services (Wilson Hall, Room 107, www.jmu.edu/ods, 540-568-6705) if you have not previously done so. Disability Services will provide you with an Access Plan Letter that will verify your need for services and make recommendations for accommodations to be used in the classroom. Once you have presented me with this letter, you and I will sit down and review the course requirements, your disability characteristics, and your requested accommodations to develop an individualized plan, appropriate for Math 220.

Religious Observation Accommodations

All faculty are required to give reasonable and appropriate accommodations to students requesting them on grounds of religious observation. The faculty member determines what accommodations are appropriate for his/her course. Students should notify the faculty by no later than the end of the Drop-Add period the first week of the semester of potential scheduled absences and determine with the instructor if mutually acceptable alternative methods exist for completing the missed classroom time, lab or activity.

Inclement Weather Policies Please find JMU's cancellation policy at http://www.jmu.edu/JMUpolicy/1309.shtml.

Academic Honesty

You are expected to finish all the quizzes and tests of this course on your own. Getting help from others on a quiz or test will be considered academically dishonest. The consequence of such behavior ranges from failure on the quiz or test to dismissal from university. The honor code of the university will be strictly enforced. The JMU Honor Code is available from the Honor Council Web site http:// www.jmu.edu/honor/code.shtml.

Disruptive behavior will result in the reduction of the student's final grade.

No Honors option will be offered in this course.

Course Outline: (Chapters in Manuscript)

1. The Nature of Experimentation and Analysis of Variance
2. Basic Concepts and The One Sample Problem
3. The Two Sample Problem
4. Analysis for the One Factor Completely Randomized Design
5. Multiple Comparisons
6. Two Factor Competely Randomized Design - Equal Replication
7. Blocking and the Randomized Complete Block Design
8. Checking Assumptions of Error Terms
9. Split Plot/Repeated Measures Designs

This is a tentative schedule. The actual contents may be altered based on the time limitation and the needs of the students.