MATH 7657-8657
Multivariate Statistical Methods
Lih-Yuan Deng, DH219, 678-3134
email: lihdeng@memphis.edu
Fall, 2020
Time: TR 1:00pm - 2:25 pm
Zoom Meeting ID: 333 162 7149
Passcode: 66088657

(A) Course Contents:

1. Chapter 1-3. Introduction and review of R Programming
2. Chapter 4. Basic Linear Algebra
3. Chapter 5. Univariate Normal Distribution
4. Chapter 6. Bivariate Normal Distribution
5. Chapter 7. Multivariate Normal Distribution
6. Chapter 8. Principal Component Analysis, Factor Analysis
7. Chapter 9. Multivariable Linear Regression
8. Chapter 10. Multinomial Logistic Regression, Support Vector Machine and Regression Trees
9. Chapter 11. Hirarchical Clustering, K-means Clustering, Model Diagnostics and Validation

(B) Office Hours: by appointment via email: lihdeng@memphis.edu. My zoom ID information: Meeting ID: 333 162 7149 Passcode: 66088657

(C) Textbook:

"Applied Multivariate Statistics with R" by Zelterman, Daniel Springer International Publishing, ISBN 978-3-319-14092-6, ISBN 978-3-319-14093-3 (eBook)DOI 10.1007/978-3-319-14093-3

(D) Class Schedule/ Expectations: This class is being offered as a Remote Course for the first month, lectures will be held over Zoom during scheduled class time. The time and URL for each Zoom meeting will be communicated in advance via email and it will be posted in eCourseware. We expect that Zoom lectures will be recorded and posted in eCourseware. Given that we have a small class size, we can be flexible on the lecture format for the remaining of the semester. Unless there is a significant improvement on the COVID-19 situation, it is likely that we will continue with the Zoom meeting. If we have a in-person class, you must wear a mask to enter the room. Attendance will not be counted toward final grade. Please take time to go to the following page and read what the administration and

faculty believe to be important considerations for you, as a student, to consider regarding the COVID-19 virus.

`https://www.memphis.edu/msci/news/covid.php`

(E) Grading:

Given the current pandemic situation, we will not have in-class written exams. Instead, we will have several individual homework assignments and group project assignments for Mid-term and Final exams. Attendance and class participation via Zoom will be counted toward final grade.

- homework (individual assignments) ..... 25 %
- mid-term exam (group project) ..... 25 %
- final exam (group project) ..... 30 %
- class participation ..... 15 %