QMM 1002

STATISTICS & DATA VISUALIZATION

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Course Information			
Code/Name	QMM1002 Stats and Data Visualization		
Delivery Method	HyFlex		
CRN	11687	**Term (YYYY/MM)**	2022/01
School	School of Business/Information Technology		

Professor Contact Information			
Name	Jenna Guse		
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Office Hours	Available upon request via Zoom		

Week	Class	Content	Course Objectives	Pages	Assessments
1	Jan 11	Introduction to the Course Review from QMM1001		Class notes	
	Jan 13	Module 1: Confidence Intervals for the Mean	1.1, 1.2, 1.5	13.1 – 13.4	
2	Jan 18	Module 1: Other Confidence Interval Topics	1.3, 1.4, 1.6	13.6	
	Jan 20	Module 2: Hypothesis Tests for the Mean	2.1, 2.2, 2.3, 2.4, 2.7	13.5	
3	Jan 25	Module 2: Other Hypothesis Test Topics	2.2, 2.4, 2.5, 2.6, 2.7	13.5	Module 1 AA [6%] January 25 @ 11:59PM
	Jan 27	Module 3: Two Sample Tests for the Mean	3.1, 3.2, 3.3, 3.4, 3.6	14.1 – 14.3	
4	Feb 1	Module 3: Other Two Sample Test Topics	3.4, 3.5, 3.7	14.4	Module 2 AA [6%] February 1 @ 11:59PM
	Feb 3	Module 4: The Pooled t-Test	4.2, 4.3, 4.4, 4.5, 4.6	14.5	
5	Feb 8	Module 4: The Paired t-Test	4.1, 4.2, 4.3, 4.5, 4.6, 4.7	14.6 – 14.7	Module 3 AA [6%] February 8 @ 11:59PM
	Feb 10	Using R Markdown for Case Study 1		Class notes	
6	Feb 15	**Case Study 1 [20%]**	**LO1 – LO4**		Module 4 AA [6%] February 15 @ 11:59PM
	Feb 17	**Case Study 1 [20%]**	**LO1 – LO4**		

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7	Feb 22	Module 5: Experimental Design	5.1, 5.2, 5.3, 5.4, 5.5, 5.6	15.1 – 15.6	**Case Study 1 Due [20%] Feb 22 @ 11:59 PM**
	Feb 24	Module 5: Introduction to ANOVA	5.7, 5.8, 5.9	15.7 – 15.9	
8	**Study Week – NO CLASSES February 28 – March 4**				
9	Mar 8	Module 6: One-Way ANOVA	6.1, 6.2, 6.4	15.7	Module 5 AA [6%] March 8 @ 11:59PM
	Mar 10	Module 6: One-Way ANOVA and Tukey's HSD	6.3, 6.5	Course notes	
10	Mar 15	Module 7: Two-Way ANOVA	7.1, 7.2, 7.3, 7.5, 7.6	15.11	Module 6 AA [6%] March 15 @ 11:59PM
	Mar 17	Module 7: Two-Way ANOVA and Tukey's HSD	7.4, 7.7	Course Notes	
11	Mar 22	Module 8: Chi-Square Test for Goodness of Fit	8.1, 8.2, 8.3, 8.5	16.1 – 16.2	Module 7 AA [6%] March 22 @ 11:59PM
	Mar 24	Module 8: Chi-Square Residuals and Plots	8.4, 8.6	16.3	
12	Mar 29	Module 9: Chi-Square Test for Homogeneity/Independence	9.1, 9.2, 9.3	16.4	Module 8 AA [6%] March 29 @ 11:59PM
	Mar 31	Module 9: Chi-Square Residuals and Plots	9.4, 9.5, 9.6	16.4	
13	Apr 5	Module 10: Time Series Data	10.1, 10.2, 10.3, 10.4, 10.9	22.1 – 22.2	Module 9 AA [6%] April 5 @ 11:59PM
	Apr 7	Module 10: Moving Average Methods	10.5, 10.6, 10.7, 10.8, 10.9	22.3 – 22.4	
14	Apr 12	Module 11: Exponential Smoothing	11.1, 11.2, 11.3, 11.4, 11.5, 11.6	22.3 – 22.4	Module 10 AA [6%] April 12 @ 11:59PM
	Apr 14	Module 11: Holt-Winters Models	11.1, 11.2, 11.3, 11.4, 11.5, 11.6	Course notes	
15	**Apr 19**	**Case Study 2 [20%]**	**LO5 – LO11**		Module 11 AA [6%] April 19 @ 11:59PM
	Apr 21	**Case Study 2 [20%]**	**LO5 – LO11**		**Case Study 2 Due [20%] April 21 @ 11:59 PM**

Assessment Information (all assessments are due at 11:59 PM on the dates listed in the table above)	
Applied Activities (AA) [60%]	Applied activities (AA) will require you to demonstrate your knowledge and practice your skills by using the R programming language to solve statistical problems. There will be an applied activity covering the material for each module (**11 applied activities**). Students can DROP their lowest applied activity grade (**best of 10 applied activities**) so each applied activity is equally weighted (**6%**). Students are expected to complete applied activities independently unless otherwise indicated but are permitted to use other resources (course notes, class recordings, R documentation, etc.).
Assignments [40%]	There will be **two** case study assignments in the course. Case studies require the analysis of a real world data set using the R programming language accompanied by a written report. Each case study is equally weighted (**20%**). All students are expected to complete each assignment **independently without the assistance of another person** but are permitted to use other resources (course notes, class recordings, R documentation, etc.).
Late Policy	Late assessments will not be accepted. In the case of illness or other extenuating circumstances, prior notice must be provided and alternate assessment due dates must be approved by your professor.