Course ID:	Course Title:		Winter 2018
BHS 310	**Quantitative Methods for Behavioural Science**	**Prerequisites:**	**BHS 240**
		Credits:	**3**

Class Information		Instructor Information		Important Dates	
Days:	Wednesday/Friday	**Instructor:**	Mitchell Colp, PhD	**First day of classes:**	Thursday, January 4
Time:	2:30pm-3:45pm	**Email:**	Mitchell.Colp@ambrose.edu	**Last day to add/drop, or change to audit:**	Sunday, January 14
Room:	A2141	**Office:**	Sessional Office	**Last day to request revised exam:**	Monday, March 5
Laboratory	Monday 11:15am-12:30pm	**Office Hours:**	By Appointment	**Last day to withdraw from course:**	Monday, March 16
Final Exam:	Saturday, April 14 1:00pm in A2133			**Last day to apply for coursework extension:**	Monday, November 20
				Last day of classes:	Monday, April 11

Course Description

This course is designed to give students a basic understanding of descriptive and inferential statistics. Emphasis is placed on practical application and students will learn to analyze and interpret basic statistical research. They will also learn to use computer software (SPSS) to analyze data. Lecture and laboratory components.

Expected Learning Outcomes

Through classes and directed readings, students will:

1. Gain a general understanding of descriptive statistics and univariate analytical approaches.
2. Identify factors that bolster and undermine the validity and reliability of employing univariate analyses.
3. Develop a rationale for when and how to incorporate univariate techniques into research methods.
4. Examine statistical theory and thought that underpins the field of applied statistics.
5. Perform descriptive and univariate analyses within the IBM SPSS statistical package.

Textbooks

Field, A., (2017). *Discovering statistics using IBM SPSS statistics* (5th Ed.). Thousand Oaks, CA: Sage Publications Inc.

Course Schedule

Week	Date	Topic	Readings	Deadlines
1	January 5	Course Introduction	Syllabus	
2	January 8	Introduction to the SPSS environment	Chapter 4	
	January 10	Why learn Statistics?	Chapter 1	
	January 12	Statistics in a Nutshell		
3	January 15	Introduction to the SPSS environment	Chapter 4	Lab Assignment #1
	January 17	Descriptive Statistics	Chapter 2	
	January 19	Descriptive Statistics		
4	January 22	Descriptive Statistics		Lab Assignment #2
	January 24	Exploring Data with Graphs	Chapter 5-6	
	January 26	The Beast of Bias		
5	January 29	Graphing Statistical Data		Lab Assignment #3
	January 31	Correlation	Chapter 8	
	February 2	Correlation		
6	February 5	Correlation		Lab Assignment #4
	February 7	Linear Regression	Chapter 9	
	February 9	Linear Regression		
7	February 12	Linear Regression		Lab Assignment #5
	February 14	Comparing Two Means	Chapter 10	
	February 16	Comparing Two Means		
8	February 26	Comparing Two Means		Lab Assignment #6
	February 28	Review Class	---	
	March 2	Theoretical Exam #1		Theoretical Exam #1
	March 5	Applied Exam #1		Applied Exam #1
9	March 7	Comparing Several Means	Chapter 12	
	March 9	Comparing Several Means		
10	March 12	Comparing Several Means		Lab Assignment #7
	March 14	Factorial Analysis of Variance	Chapter 14	
	March 16	Factorial Analysis of Variance		
11	March 19	Factorial Analysis of Variance		Lab Assignment #8
	March 21	Repeated Measures Analysis of Variance	Chapter 15	
	March 23	Repeated Measures Analysis of Variance		
12	March 26	Repeated Measures Analysis of Variance		Lab Assignment #9
	March 28	Analysis of Covariance	Chapter 13	
13	April 6	Analysis of Covariance		
14	April 9	Applied Exam #2	Chapter 14	Applied Exam #2
	April 11	Review Class	---	
	April 14	Theoretical Exam #2 - Scheduled at 1:00pm in A2133		

Please note that changes to the course schedule may occur in response to student questions and conversations.

Learning Tasks and Assessment:

There are three required Learning Tasks for this course.

Learning Task	Description of Task	Percentage of Grade
Learning Task #1	Laboratory Assignments	30%
Learning Task #2	Applied Examinations	30%
Learning Task #3	Theoretical Examinations	40%

Important Note. Percentage scores will be given for each course assignment. The weighting of each will be calculated and summed to provide the final letter grade. The completion of all assigned tasks is required for a passing grade in this course. With the exception to examinations, all assignments are due by 11:59pm MST of the assigned date.

Late Bank. A 3-day late bank will be provided to all students, and they can use these days at their own discretion and without explanation during the term. For instance, a student could submit their lab #1 assignment 2 days late and their lab #2 1 day late, or just their lab #4 assignment 3 days late. **The late bank cannot be used for the midterm or final applied or theoretical examinations**. This is designed to provide students with some flexibility regarding personal situations, illness, workload management, or other concerns that may arise during the course timeline. Once you have used up your 3 late bank days, a penalty of 10% per day will apply for unexcused late submissions of assignments.

Learning Task #1: Laboratory Assignments (30%) – Various Due Dates

Throughout the semester, students will work independently to complete applied problems associated with assigned readings, lectures, and laboratory learnings. Students will submit completed responses to the instructor by email before 11:59pm MST on the assigned due date. Submitted responses should be no more than 300 words and follow APA 6th Edition guidelines for general style and referencing. No cover page is required for these submissions. These brief assignments will be combined to make up the 30% mark once all have been submitted.

	Assignment Topic	Date Due
Laboratory #1 Assignment	Introduction to the SPSS environment	January 15
Laboratory #2 Assignment	Descriptive Statistics	January 22
Laboratory #3 Assignment	Graphing Statistical Data	January 29
Laboratory #4 Assignment	Correlation	February 5
Laboratory #5 Assignment	Linear Regression	February 12
Laboratory #6 Assignment	Comparing Two Means	February 26
Laboratory #7 Assignment	Comparing Several Means	March 12
Laboratory #8 Assignment	Analysis of Covariance	March 19
Laboratory #9 Assignment	Factorial Analysis of Variance	March 26

Each question will be marked using the rubric included on page 5 of the course syllabus.

Learning Task #2: Applied Examinations (30%) – March 5, 2018 and April 9, 2018

Students will be given two time-limited laboratory examinations that assess their knowledge and understanding of IBM SPSS to apply univariate analyses for a variety of applied problems. The examinations are open-book and are expected to be completed independently.

Applied Examination #1 – March 5, 2018: The exam will cover the first seven laboratory topics and constitute 15% of the final grade. It will contain 15 multiple choice questions with 4 possible response choices. The exam questions will cover the application of data entry, descriptive analysis, correlation, linear regression, and analyses for comparing two means. Students will be given 60 minutes to complete the examination.

Applied Exam #2 – April 9, 2018: The exam will cover the last three laboratory topics and constitute 15% of the final grade. It will contain 15 multiple choice questions with 4 possible response choices. The exam questions will the application of analyses for comparing several means, factorial analysis of variance, and repeated measures analysis of variance. Students will be given 60 minutes to complete the examination.

Learning Task #3: Theoretical Examinations (40%) – March 2, 2018 and April 14, 2018
Students will be given two time-limited examinations that assess their knowledge, understanding, and synthesis of course materials and core concepts. The examinations are closed-book and are expected to be completed independently.

Theoretical Examination #1 – March 2, 2018: The exam will cover the first eight weeks of lecture and constitute 20% of the final grade. It will contain 30 multiple choice questions with 4 possible response choices. The exam questions will be taken exclusively from the chapter readings and lecture materials, and will include theoretical applications of knowledge. Students will be given 60 minutes to complete the examination.

Theoretical Examination #2 – April 14, 2018: The exam will cover the last six weeks of lecture and constitute 20% of the final grade. It will contain 30 multiple choice questions with 4 possible response choices. The exam questions will be taken exclusively from the chapter readings and lecture materials, will include theoretical applications of knowledge. Students will be given 60 minutes to complete the examination.

Attendance:
Students are expected to regularly attend lectures. Missing class regularly without adequate rationale will not only impact your ability to successfully complete the course, in extreme cases the instructor reserves the right to ask the student to withdraw from the course. You are not required to inform the instructor if you miss a class, but you should coordinate with a friend in the class to obtain any notes and instructions missed. Failure to communicate with the instructor regarding multiple absences or extenuating circumstances severely limits your ability to receive any accommodations.

Grade Summary:
The available letters for course grades are as follows:

Letter Grade	GPA	Percentage	Descriptor
A+	4.00	96-100	
A	4.00	90-95	Excellent
A-	3.70	85-89	
B+	3.30	80-84	
B	3.00	75-79	Good
B-	2.70	70-74	

C+	2.30	65-69	
C	2.00	60-64	Satisfactory
C-	1.70	55-59	
D+	1.30	50-54	
D	1.00	45-49	Minimal Pass
F	0.00	< 45	Failure

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

Marking Rubrics

Criteria for Assessment of Learning Task #1 - Laboratory Assignments

Area of Evaluation	Needs work	Limited	Proficient	Highly Proficient	Score
Thoroughness of Answer	Answer not provided or unclear **(0-4 marks)**	Answer missing relevant elements **(5-7 marks)**	Sufficient answer but may miss relevant links between question and background information **(7-8 marks)**	Well-developed answer. Clear links between question and relevant background information provided **(9-10 marks)**	/10

Ambrose University Academic Policies:

Communication
All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

Registration
During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline;** please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Exam Scheduling
Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

Electronic Etiquette
Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devises in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies
It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions
Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

Appeal of Grade
An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of $50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

Academic Integrity
We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

Note: Students are strongly advised to retain this syllabus for their records.