

<b>Course ID:</b>	<b>Course Title:</b>	<b>Winter 2021</b>
<b>BHS 310</b>	<b>Quantitative Methods for Behavioural Science</b>	<b>Prerequisites: BHS 240</b>
		<b>Credits: 3</b>

Class Information		Instructor Information		Important Dates	
<b>Days:</b>	Monday	<b>Instructor:</b>	Mitch Colp, PhD	<b>First day of classes:</b>	January 11
<b>Time:</b>	(Class) 8:00am - 11:00am (Lab) 11:00am - 1:00pm	<b>Email:</b>	Mitchell.Colp@ambrose.edu	<b>Last day to add/drop, or change to audit:</b>	January 24
<b>Room:</b>	Virtual	<b>Office:</b>	Virtual	<b>Last day to request revised exam:</b>	March 8
<b>Final Exam:</b>	April 12, 2021	<b>Office Hours:</b>	By Appointment	<b>Last day to withdraw from course:</b>	March 19
				<b>Last day to apply for coursework extension:</b>	March 29
				<b>Last day of classes:</b>	April 16

### 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 by hand and within the IBM SPSS statistical package.

### Textbooks

Howell, D.C. (2017). *Fundamental statistics for the behavioral sciences* (9<sup>th</sup> ed.). Boston, MA: Cengage Learning.

### Recommended Text

American Psychological Association. (2019). *Publication manual of the American Psychological Association* (7<sup>th</sup> ed.). Washington, D.C.: American Psychological Association.

## Required Software

Student will be expected to purchase **IBM® SPSS® Statistics Standard GradPack 27** and install it on their personal device. Notable discounts can be found at e-stores like OnTheHub and students are encouraged to purchase either the 6-month or 12-month rental licence.

## Course Schedule

Week	Date	Topic	Readings	Administered Task
1	January 11	Course Introduction	---	---
	January 11	Open Laboratory	---	---
2	January 18	Basic Concepts	Chapter 1 and 2	---
	January 18	Introduction to IBM SPSS – Part 1	---	---
3	January 25	Displaying Data	Chapter 3	---
	January 25	Introduction to IBM SPSS – Part 2	---	---
4	February 1	Measures of Central Tendency	Chapter 4	---
	February 1	Examining Central Tendency and Normality	---	Assignment #1 Due
5	February 8	Measures of Variability	Chapter 5	---
	February 8	Examining Variance and Standard Deviation	---	Assignment #2 Due
6	February 15	<b>Family Day (No Class)</b>		
	February 15	<b>Family Day (No Laboratory)</b>		
7	February 22	The Normal Distribution and Probability	Chapter 6 and 7	---
	February 22	IBM SPSS and Calculation Clinic	---	Assignment #3 Due
8	March 1	Examination #1	---	---
	March 1	Open Lab	---	Assignment #4 Due
9	March 8	Sampling Distributions and Hypothesis Testing	Chapter 8	---
	March 8	Testing Real Hypotheses	---	---
10	March 15	Correlation and Measures of Association	Chapter 9	---
	March 15	Correlation and Measures of Association	---	---
11	March 22	Independent t-Test and Measures of Difference	Chapter 14	---
	March 22	Independent t-Test and Measures of Difference	---	Assignment #5 Due
12	March 29	Dependent t-Test and Measures of Change	Chapter 13	---
	March 29	Dependent t-Test and Measures of Change	---	Assignment #6 Due
13	April 5	<b>Easter Monday (No Class)</b>		
	April 5	<b>Easter Monday (No Laboratory)</b>		
14	April 12	Examination #2	---	---
	April 12	Open Lab	---	Assignment #7 Due

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

## Learning Tasks and Assessment:

There are two required Learning Tasks for this course.

Learning Task	Description of Task	Percentage of Grade
Learning Task #1	Laboratory Assignments	50%
Learning Task #2	Examinations	50%

**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 laboratory assignments and examinations is required for a passing grade in this course.** Assignments must be submitted on the identified deadline stated in the course syllabus, otherwise a 10% per day will be applied for any unexcused late submissions.

### **Learning Task #1: Laboratory Assignments (50%) – 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. These brief assignments will be combined to make up the 50% mark once all have been submitted.

	<b>Assignment Topic</b>	<b>Date Due</b>
Laboratory #1 Assignment	Frequency Distributions	February 1
Laboratory #2 Assignment	Central Tendency	February 8
Laboratory #3 Assignment	Variance and Standard Deviation	February 22
Laboratory #4 Assignment	Probability	March 1
Laboratory #5 Assignment	Correlation	March 22
Laboratory #6 Assignment	Independent t-Test	March 29
Laboratory #7 Assignment	Dependent t-Test	April 12

---

### **Learning Task #2: Examinations (50%) – March 1, 2021 and April 12, 2021**

Students will be given two time-limited examinations that assess their knowledge, understanding, and synthesis of course materials and core concepts. The examinations are expected to be completed independently and will transpire during the scheduled class time.

*Examination #1 – March 1, 2021:* The exam will cover the first seven weeks of lecture and constitute 25% of the final grade. It will contain a series of short answer and multiple-choice questions. The exam questions will be taken from the assigned chapter readings and presented lectures. They will include theoretical and applied applications of knowledge. Students will be given three hours to complete the examination.

*Examination #2 – April 12, 2021:* The exam will encompass assigned readings and lectures hosted between Weeks 9 and 13. This second examination will constitute 25% of the final grade. It will contain a series of short answer and multiple-choice questions. The exam questions will be taken from the assigned chapter readings and presented lectures. They will include theoretical and applied applications of knowledge. Students will be given three hours to complete the examination.

---

### **Attendance:**

Students are expected to regularly attend lectures and laboratories. Missing these 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
A+	4.00	96-100
A	4.00	91-95
A-	3.70	86-90
B+	3.30	82-85
B	3.00	75-81
B-	2.70	72-74
C+	2.30	68-71
C	2.00	63-67
C-	1.70	60-62
D+	1.30	56-59
D	1.00	50-55
F	0.00	0-49

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.

## 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 devices 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](mailto: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. 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.

### **Mental Health Support**

All of us need a support system. We encourage students to build mental health supports and to reach out when help is needed.

#### On Campus:

- Counselling Services: [ambrose.edu/counselling](http://ambrose.edu/counselling)
- Peer Supportive Listening: One-to-one support in Student Life office. Hours posted at [ambrose.edu/wellness](http://ambrose.edu/wellness).
- For immediate crisis support, there are staff on campus who are trained in Suicide Intervention and Mental Health First Aid. See [ambrose.edu/crisissupport](http://ambrose.edu/crisissupport) for a list of staff members.

#### Off Campus:

- Distress Centre - 403-266-4357
- Sheldon Chumir Health Care Centre - 403-955-6200
- Emergency - 911

### **Sexual Violence Support**

All staff, faculty, and Residence student leaders have received *Sexual Violence Response to Disclosure* training. We will support you and help you find the resources you need. There is a website with on and off campus supports – [ambrose.edu/sexual-violence-response-and-awareness](http://ambrose.edu/sexual-violence-response-and-awareness).

#### Off Campus:

- Clinic: Sheldon Chumir Health Centre - 403-955-6200
- Calgary Communities Against Sexual Abuse - 403-237-5888

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