



Class Information		Instructor Information		First day of classes:	Wed., Sept. 9, 2015
Lectures	Tues/Thurs 4:00-5:15pm	Instructor:	Brianne M. Collins, MSc PhD Candidate	Last day to add/drop, or change to audit:	Sun, Sept 20, 2015
	A2131	Email:	bcollins@ambrose.edu		
Labs	Mondays 4:00-5:15pm	Phone:	403-410-2000 (ext. 6904)	Last day to request revised exam:	Mon., Oct. 26, 2015
	A2131		Office:		
Final Exam day		Office Hrs:	Thurs, 12:30-1:30pm or by appointment	Last day to apply for time extension for coursework:	Mon, Nov 23, 2015
N/A					Last day of classes:

Textbook: Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th Ed). London, UK: SAGE.

Supplies: Scientific calculator with statistical functions (between \$15-20); graphing calculators are not permitted

Course Description (Academic Calendar):

Multivariate analysis as applied to behavioural science. Correlation, simple and multiple regression, discriminant function analysis, canonical correlation, factor analysis, theories and applications of behavioural measurement, reliability, and validity will be presented. Lecture and laboratory components.

Expected Learning Outcomes:

By the end of this course, students will have the necessary knowledge and skills to be able to:

- Determine the most appropriate statistical analysis to compute based on a given research question, study design, and the data collected
- Analyze univariate (i.e., one outcome) and basic multivariate (i.e., more than one outcome) quantitative data using a statistical software package (i.e., SPSS)
- Interpret results obtained via statistical analysis and compose accurate and informative results sections that meet APA/ASA style guidelines
- Identify a number of current debates within the field (e.g., limitations of the NHST, P-Hacking)

Course Schedule:

PowerPoint notes, lab handouts, and/or assignments will be posted on Moodle by noon the day of class/lab.

Week	Date	Lecture Topic	Readings for Lecture	Lab Topic (Mondays)	Lab Assignments Due
1	Thurs, Sept 10	Course Introduction	Syllabus	---	---
2	Tues, Sept 15	Review of descriptive and inferential statistics from BHS 310	Chapter 1 Review course notes/textbook from BHS 310	Intro to SPSS [Chapter 3]	---
	Thurs, Sept 17				
3	Tues, Sept 22			t-tests (Lab # 1)	---
	Thurs, Sept 24				
4	Tues, Sept 29	Repeated Measures ANOVA	---	ANOVA (Lab #2)	Lab #1 due in lab
	Thurs, Oct 1	No Class (Spiritual Emphasis Days)	---		
5	Tues, Oct 6	Factorial ANOVAs	---	Factorial ANOVA (Lab #3)	Lab #2 due in lab
	Thurs, Oct 8				
6	Tues, Oct 13	Quiz #1 (Oct 13) Critiques of NHST Power and Effect Sizes	Chapter 2	No Lab (Thanksgiving)	Lab #3 Due in class on Tuesday, Oct 13
	Thurs, Oct 15				
7	Tues, Oct 20	Assumptions	Chapter 5	Power & Effect Sizes (Lab #4)	---
	Thurs, Oct 22				
8	Tues, Oct 27	Introduction to the GLM Model	Chapter 2	Plotting Data [Chapter 4] (Lab #5)	Lab #4 due in lab
	Thurs, Oct 29	Quiz #2 (Oct 29) Statistical Models and Correlation	Chapter 7		
9	Tues, Nov 3			Regression (Linear, Multiple, Hierarchical)	Chapter 8
	Thurs, Nov 5				
10	Tues, Nov 10	ANOVA & ANCOVA	Chapter 9, 11-13	Correlation & Linear Regression (Lab #6)	---
	Thurs, Nov 12				
11	Tues, Nov 17	ANOVA & ANCOVA	Chapter 9, 11-13	Multiple Regression (Lab #7)	Lab #6 due in lab
	Thurs, Nov 19				
12	Tues, Nov 24	ANOVA & ANCOVA	Chapter 9, 11-13	Hierarchical Regression (Lab #8)	Lab #7 due in lab
	Thurs, Nov 26				
13	Tues, Dec 1	ANOVA & ANCOVA	Chapter 9, 11-13	No Lab	Lab #8 due in class on Tues, Dec 1
	Thurs, Dec 3				
14	Tues, Dec 8	Quiz #3 (Dec 8) Introduction to MANOVA Final Exam Assigned (Dec 10)	Chapter 16	ANCOVA (Lab #9)	---
	Thurs, Dec 10				
15	Mon, Dec 14	---	---	---	Lab #9 due by 11:59pm on Moodle

Note: The above course schedule is subject to change. It is important therefore to attend all classes and to check your Ambrose email account and Moodle for updates and/or changes.

Requirements:

Component	% of Final Grade
Lab Assignments (9 x 5%)	45%
Quizzes (3 x 10%)	30%
Take-Home Final Exam	25%
TOTAL	100%

Note: In order to pass the course, all components of the course must be submitted (and in complete form).

Lab Assignments (9 x 5% = 45%) – Due: Throughout semester (see schedule below)

The laboratory component of the course is mandatory and is designed to facilitate experiential learning and practical application of the material. There are nine lab assignments required in this course, which together will comprise 45% of your final grade. Unless otherwise indicated, lab assignments will be due in hardcopy at the beginning of lab on the dates listed below. Handouts with specific details (e.g., requirements, formatting, etc) for each lab assignment will be provided and reviewed in the lab in which they are assigned as well as posted on Moodle.

Late assignments will receive 10% off per calendar day including if an assignment is submitted outside of the scheduled lab time (i.e., you must be present to submit your assignments). Be sure to plan ahead for timely completion as extensions will not generally be granted (you do not want to get behind because lab assignments build on one another and often follow immediately after the ones preceding it). In the case of illness or extenuating circumstances, appropriate documentation (e.g., a doctor's note) must be provided in order to avoid any late penalties.

Lab Assignment Schedule

Lab	Topic	Date Assigned	Deadline	% of Lab Grade
1	<i>t</i> -tests	Mon, Sept 21	Mon, Sept 28	5
2	ANOVA	Mon, Sept 28	Mon, Oct 5	5
3	Factorial ANOVA	Mon, Oct 5	Tues, Oct 13*	5
4	Power & Effect Sizes	Mon, Oct 19	Mon, Oct 26	5
5	Plotting Data	Mon, Oct 26	Tues, Nov 3*	5
6	Correlation & Linear Regression	Mon, Nov 9	Mon, Nov 16	5
7	Multiple Regression	Mon, Nov 16	Mon, Nov 23	5
8	Hierarchical Regression	Mon, Nov 23	Tues, Dec 1*	5
9	ANCOVA	Mon, Dec 7	Mon, Dec 14**	5
TOTAL				45%

* = Lab Assignments (#3, 5, 8) due in hardcopy in class on the date specified

** = Lab Assignment (#9) due by 11:59pm on Moodle on the date specified

Quizzes (3 x 10% = 30% of final grade) – Due: Throughout semester (see schedule below)

While the focus of this course is on the practical aspects of quantitative analysis, there will be three quizzes throughout the semester intended to evaluate conceptual and theoretical comprehension of course material. Quizzes will take place at the start of the lecture in which they are scheduled and will take approximately 30 minutes to complete; classes will then carry on with a lecture on those days. While quizzes are not intended to be cumulative, a strong grasp of earlier course material will be important for successful results on all quizzes. A schedule below with tentative topics to be covered on each quiz is provided below; however, this may be amended as the course proceeds. Thus, topics to be covered on each quiz will be confirmed in class prior to the dates below; in addition, information on the types of questions that will be asked will also be addressed in advance of each quiz. Should any calculations be necessary, you will be permitted to use a scientific calculator (i.e., no graphing calculators allowed).

Quiz Schedule

Quiz	Date	Tentative Topics Covered	% of Lab Grade
1	Tues, October 13	Review from BHS 310; repeated measures and factorial ANOVAs	10%
2	Thurs, October 29	Critiques of NHST, power and effect sizes, assumptions; intro to GLM	10%
3	Tues, December 8	Correlation; Regression (all forms discussed); ANOVA (all forms discussed); ANCOVA	10%
TOTAL			30%

Take-Home Final Exam (25%) – Due: Saturday, December 19 by 11:59pm on Moodle

In order to evaluate overall theoretical and practical comprehension of course material, students will complete a take-home final exam. Students are to work independently and will need to submit individual final exams—evidence to the contrary will be considered an act of intellectual dishonesty and will be dealt with accordingly. Given that there are only four computers in the library that have SPSS installed, students will need to plan ahead in order to access SPSS for the final exam. More information on the final exam will be discussed in class towards the end of the semester.

The final exam will be assigned at the end of the last class on Thursday, December 10. The exam (including write-up, outputs, graphs, and any other necessary components) is **to be submitted on Moodle no later than 11:59pm on Saturday, December 19**. Given that this is a final exam, no extensions will be given (with the exception of extenuating circumstances accompanied, when possible, with appropriate documentation).

Attendance and Classroom Etiquette:
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Students are expected to regularly attend lectures and labs. Missing class/lab 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.

If you miss a class, you are responsible to contact the instructor by email **in advance** to let him/her know you will not be in class. In addition, you must coordinate with a friend in the class to obtain any notes and instructions missed that day. Failure to communicate with the instructor regarding multiple absences or extenuating circumstances severely limits your ability to receive any accommodation or leniency should the situation normally support such a solution.

Learning and Classroom Etiquette

In the Behavioural Science Department we believe that learning is an active and interactive process; a joint venture between student and teacher and between student and student (i.e., learning is not just “downloading” information from teacher to student). Therefore, it is expected that professors will come to each class well read and prepared to engage students on the topic at hand, giving students the utmost attention and respect. In turn, it is expected that students will take an active role in the learning process. This includes: (a) regular class attendance; (b) reading course material in advance of class; (c) showing up to class on time; and (d) attentively and proactively being “present” at class (i.e., not on the internet, not texting, not conversing with the person beside you). Committing to this type of “active learning” significantly increases the learning experience for both teacher and student, and reflects the Christian ethos of excellence and respect that lies at the heart of the Ambrose educational experience. Failure to adhere to this will result in the instructor either asking the student to leave the classroom for the remainder of the lecture or, in extreme cases (i.e., three or more ‘offenses’), to possibly withdraw from or fail the entire course.

Grade Summary:

The available letters and percentages for course grades are as follows:

Letter Grade	Percentage	GPA	Description
A	96% and above	4.0	
A	91 – 95%	4.0	Excellent
A-	86 – 90%	3.7	
B+	82 – 85%	3.3	
B	75 – 81%	3.0	Good
B-	72 – 74%	2.7	
C+	68 – 71%	2.3	
C	63 – 67%	2.0	Satisfactory
C-	60 – 62%	1.7	
D+	56 – 59%	1.3	
D	50 – 55%	1.0	Minimal Pass
F	Below 50%		Failure

Because of the nature of the Alpha 4.00 system, there can be no uniform College-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.

Instructor Electronic Communication Policy

Whenever possible, I will respond to all emails within 48 hours during the week (Monday to Friday). In most cases, emails received on weekends will be responded to on Monday. Although I may respond to occasional emails on a weekend (i.e., if I am working on course material during that particular weekend), please remember that responses on a weekend cannot be guaranteed.

In addition, as email is not always a practical means to address questions or concerns regarding course content or requirements, I may email students back with a request to meet to discuss an email in lieu of responding in full via email.

Resources for Students:

Accessibility and Support Services (formerly Learning Services)

The primary mission of Ambrose University’s Accessibility and Support Services Centre is to assist students in achieving academic success. It accomplishes this through a wide variety of services and programs. Accessibility and Support

Services are available to all students who wish to improve their academic skills and ability to learn, thereby maximizing their academic experience and allowing them to achieve greater academic performance and personal fulfillment. The centre also has as its mandate, the specific and complementary responsibility of providing support for students with learning and/or physical disabilities, and ensure for them equal academic opportunities.

What if I have a Learning Disability or think that I might have one?

If you are already diagnosed with a learning disability then we will work one-on-one with you. This could include any number of accommodations and is specific to each individual. If you are wondering if you do have a learning disability we can work with you to pursue testing and to try different strategies to see if it helps with the challenges you are encountering. It is important to remember that we cannot help you if you do not tell us you are experiencing difficulties. All information is kept confidential and any accommodations are handled discreetly.

What if I have a Physical Disability?

If you have a physical disability we will work with you to determine what we can do to help.

Contact Information

Feel free to drop in to room A2018, Monday through Friday from 8:30am to 4:30pm.

Contact by phone (403-410-2937) or email (accessibility@ambrose.edu).

For more information, please visit: https://ambrose.edu/student_life/learning-services

Counselling Services

Confidential, personal, pastoral, and vocational counseling is available to all students through the Student Development Department. Ambrose substantially subsidizes counseling services; however, there is still a nominal fee of \$30 per appointment that will be charged to your student account at the end of each month, for each scheduled appointment. There is a \$75 fee that will be charged to your student account if you cancel or miss your appointment within 24 hours of your scheduled time. Under extenuating circumstances, if you need to change or cancel your appointment within the 24 hour period, contact Liz Jantzen (ejantzen@ambrose.edu).

How do I book an appointment?

Appointments can be booked online here: <https://my.ambrose.edu/content/counselling-services>.

To book in person visit Liz Jantzen in Student Development (room A2018, Monday through Friday from 8:30am to 4:30pm).

Contact Information

For additional information, please visit: https://ambrose.edu/student_life/counselling-services.

Drop by Student Development in room A2018 (Monday through Friday, 8:30am-4:30pm) and speak to Liz Jantzen if you have any additional questions or concerns.

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.

Exam Scheduling

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.

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.

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.