

**Statistical Consulting Project
Stat 496 (ASo1)**

Winter 2021

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Office Hours: by appointment

Lecture Time: M 11 AM – 2 PM

Lecture Room: 7-286, Blackboard Ultra

Course Credits: 3

Course Hours: **Lecture 0 Lab 0 Seminar 45**

Course Description: The aim of the course is to provide students with experience in statistical consultation. Students are assigned to research projects as consultants, which requires them to consider ethical statistical practice, choose the appropriate statistical technique, and communicate the results to a non-mathematical audience.

Course Objectives: Upon completion of this course, the student will be able to...

- Effectively communicate with non-experts about statistics
- Apply ethical statistical practice in their projects
- Propose the proper statistical approach to a range of problems
- Conduct a range of statistical analyses with R and/or SPSS
- Write scientific reports
- Present statistical results and their interpretation to non-experts

Course Prerequisite(s): A minimum grade of C- in two 300-level statistics courses and consent of the department.

Required Learning Materials: Course notes posted online

Other Learning Resources: Statistical Consulting by J. Cabrera and A. McDougall, Springer (2001)
(not required, but might be helpful reading)

Teaching Mode: The course will be presented face to face and online. Online lectures will be recorded, and recordings will be made available to students on Blackboard. All recordings will be available until the end of the term.

Seminars, Assignments and/or Reports:

Assignment	Due Date
#1	January 18
#2	January 25
#3	February 1
#4	February 8
#5	February 22
#6	March 1
#7	March 15
#8	March 29
Project Report	April 12

Evaluation:

Project(s)	60
Assignments	40
	100%

Project:

Project assessment includes:

- report on the first meeting
- Final report
- communication effectiveness with client (meetings/emails/timeliness/listening/professionalism)
- presentation not included

Grading:

MacEwan University adheres to the Alberta Common Grading Scheme, which is a 12 point letter grade system. While faculty may use percentages to aid in their grade development, only the letter grade will appear on transcripts.

A+	95-100
A	90-94
A-	85-89
B+	80-84
B	75-79
B-	70-74
C+	65-69
C	60-64
C-	55-59
D+	50-54
D	45-49
F	0-44

Official grades will be provided by the Office of the University Registrar through myStudentSystem. A minimum grade of C– is required to receive transfer credit or to satisfy a prerequisite for a higher level course.

Note: A minimum of 40% is required on the final exam in order to obtain a grade of C- or better in the course.

Student Responsibilities:

Students should familiarize themselves with the policy on Student Rights and Responsibilities (E3101) and appeals (3103).

(<https://www.macewan.ca/wcm/StudentAffairs/AcademicIntegrity/RightsResponsibilities/Students/index.htm>).

1. **Academic Integrity:** Students are responsible for understanding the Student Academic Integrity Policy (https://www.macewan.ca/contribute/groups/public/documents/policy/zwd/cg9s/~edisp/student_acad_integ_policy.pdf) and what constitutes academic misconduct. All incidents of academic misconduct, as outlined in the policy, are reported and recorded by the Academic Integrity Office (<https://www.macewan.ca/wcm/StudentAffairs/AcademicIntegrity/index.htm>). Information and resources are available on MacEwan's Academic Integrity Website (<https://www.macewan.ca/wcm/StudentAffairs/AcademicIntegrity/index.htm>).

MacEwan University's Academic Integrity Policy

(https://www.macewan.ca/contribute/groups/public/documents/policy/zwd/cg9s/~edisp/student_acad_integ_policy.pdf) promotes honesty,

fairness, respect, trust, and responsibility in all academic work. The policy defines academic misconduct as the following: “Participating in acts by which a person gains or attempts to gain an unfair academic advantage thereby compromising the integrity of the academic process,” including:

- cheating
- plagiarism
- improper collaboration
- contract cheating (severe misconduct)
- fabrication and falsification
- helping, or attempting to help, another student commit academic misconduct
- obtaining an unfair advantage
- multiple submissions

In this course appropriate collaboration is defined by:

- exchanging ideas for how to approach assignment questions is acceptable
- all submitted work must have been completed individually
- all quizzes and exams can only include work created by the submitting student.

For any material created and submitted as part of a graded course component, students will only access authorized resources (e.g. textbooks, course readings etc.) and use technological aids only as permitted by the instructor.

Students will not share test, exam, or assignment answers through social media, posts, texting, or otherwise.

2. **Registration Status:** You are responsible for your registration status at the University, such as adding and dropping of courses and confirming that the changes have been made.
3. **Course prerequisites:** Students are responsible for having all prerequisites required for a given course. Students who do not have the appropriate prerequisite may be removed from the course. If removed from the course, the student is responsible for any tuition costs up to the date of removal. Courses from another post-secondary institute cannot be used as a prerequisite until assessed and approved for transfer credit.
4. **Withdrawing From The Course:** If you stop attending class you must complete
(https://www.macewan.ca/contribute/groups/public/documents/document/03203_add_drop_notice.pdf), have it signed by an Academic Advisor (Rm 6-211), and submit it to the Office of the University Registrar by the last day to withdraw as provided in the Academic Schedule (<https://www.macewan.ca/wcm/Registrar/EnrolmentServices/AcademicSchedule/index.htm>). Failure to officially withdraw will result in a grade being assigned based on course work completed. Late withdrawals are only allowed in exceptional circumstances.

5. **Exam:** All exams (including quizzes) will be administered through Crowdmark. More details will be shared during class and through Blackboard and emails.
6. **Missed Term Exams:** If you miss a term examination, you must contact your instructor within 48 hours. Notification may be provided through email, voice mail, or direct contact with the instructor. The weight of a missed examination may be added to the weight of the final examination in the course or an alternative assignment or exam may be assigned at the discretion of the instructor. If the instructor has not been contacted within 48 hours, the recorded mark of the missed examination will be zero.
7. **Final Exams:** Policy [C2005: Final Assessment](https://www.macewan.ca/contribute/groups/public/documents/policy/final_assessment.pdf) (https://www.macewan.ca/contribute/groups/public/documents/policy/final_assessment.pdf) and Policy [C2020: Grading](https://www.macewan.ca/wcm/Registrar/EnrolmentServices/AcademicStandingandGrades/GradesandGPA/index.htm) (<https://www.macewan.ca/wcm/Registrar/EnrolmentServices/AcademicStandingandGrades/GradesandGPA/index.htm>). Students are responsible for confirming the date, time, duration and location of the final exam. Students unable to attend any scheduled exam for any reason must contact their instructors within two business days.

** Instructors: Please be aware of the option to use incompletes.*

8. **Deferred Final Exam Process:** For the upcoming exam session, the deferred final exam process will not be used and we are going to treat everything as an Incomplete. Students who contact their instructor and are unable to complete everything (coursework or final exams) in time for instructor to submit a letter grade by the grade submission deadline (**April 24**) will need to fill out and submit the an incomplete grades form (https://www.macewan.ca/contribute/groups/public/documents/document/03205_incomplete_grades.pdf). If students can't sign it, scan it, and send it electronically, an email from their MacEwan account is sufficient. It then needs to go to the chair for approval.
9. **Late Assignments (including laboratory assignments):** As due dates for assignments are known well in advance, medical and other excuses are generally not accepted as a reason for submitting late assignments.
10. **Cell Phones:** All cell phones are to be turned off during class and exam periods (except under exceptional circumstances in which approval has been given by the instructor).
11. **Access and Disability Resources:** If you require exam accommodations due to a disability, you are advised to contact and

register with MacEwan's Access and Disability Resources well in advance of booking your first exam. To obtain information about Access and Disability Resources services and the process for registering with Access and Disability Resources, visit the website: <https://www.macewan.ca/wcm/StudentAffairs/AccessandDisabilityResources/index.htm>

To make an appointment with one of ADR's professional resource staff, contact the receptionist at ADR as follows:

Telephone: 780-497-5886
Email: myaccess@macewan.ca

12. **Student Appeals:** See Policy E3103: Student Appeals (https://www.macewan.ca/contribute/groups/public/documents/policy/student_appeals.pdf). You should access this policy to become aware of the deadlines and guidelines that need to be followed if you are appealing a grade or other University assessment. Assistance with the appeals process is available through counsellors in the Student Life office. Please call 780 497 5064 to make an appointment.
13. **MyMacEwan.ca Email:** All students are given a `<name>@mymacewan.ca` email address. This email address is available to the course instructor who may distribute relevant course information or announcements via email. The Faculty of Arts and Science regularly communicates with students via email. Check your mymacewan.ca email regularly *or* forward it to an email address you check regularly. If you use email to communicate with your instructor, you *must* use your mymacewan.ca account. This is to protect your privacy; if a non-mymacewan.ca account is used, there is no way for an instructor to verify the identity of the sender.
14. **Learning Materials:** Students can purchase all learning materials on the bookstore website (<https://www.macewanbookstore.com/>). The bookstore offers free shipping inside of Alberta and a reduced rate of \$10 outside of Alberta. Students also have the option to purchase online and pick up materials on campus: curbside pickup is available at the south 106 street parking turnaround (outside Towers Pub) from 10 a.m. – 2 p.m., Monday to Friday.

Staff will provide support for students that need to purchase in person. Students are encouraged to call 1-866-418-0391 with any questions, or check the bookstore website (<https://www.macewanbookstore.com/>) and social media feeds for updates.
15. **Technology Recommendations:** Access to sufficient technology and reliable internet access may be necessary to complete University-level online classes at MacEwan. Instructors expect that students are able to complete work on time through the systems provided on the MacEwan

Portal. While tablets, smartphones and other mobile devices are not guaranteed to work; the responsibility for completion is the student's. Successful completion may depend on an adequate Windows or Mac based computer. If you do not have a reliable computer and/or internet access, you may be able to borrow these from the MacEwan library. Check with tech support (techsupport@macewan.ca) for more information.

16. **Disclaimer and Important Notice:** See Disclaimer and Important Notice information (<https://calendar.macewan.ca/disclaimer-important-notice/>)

17. ***The University reserves the right to modify or replace the method of delivery for the course, including a temporary or permanent suspension of in-person learning in favour of virtual or online learning at any time before or during the course where the University determines that the delivery of in-person learning presents a risk to the health or safety of the University or to a member of the MacEwan University community, or for any other reason as determined by the University. Any change in the method of delivery for the course will be announced via email notification to students' MacEwan email addresses.***

18. **Recordings:** To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use. Students who wish to record lectures or class activities for study purposes must inform the faculty member first. Students with approved accommodations from Access and Disability Resources permitting the recording of class meetings must present the accommodation letter to the instructor in advance of any recording being done. On any days when classes will be recorded, the instructor will notify all students in advance. Distribution or sale of class recordings is prohibited without the written permission of the instructor and other students who are recorded.

Students are not permitted to share any class recording with any other person, post the recording online, or use the recording for any purpose other than for the purpose of private self-study.

Disclaimer: *The information in this course outline is subject to change. Any changes will be announced in class or, if applicable, in the laboratory.*

Seminar Topics:

- 1) Scientific Method
- 2) The role of the statistical consultant
- 3) First contact and meeting with clients
- 4) Research Ethics (TCPS2 core certificate)
- 5) Communication
 - a) Meeting
 - b) Writing a Report
 - c) Oral presentation
- 6) Methodology (as required by projects)
 - a) Survival Analysis
 - b) Structural Equation Modelling
 - c) Power Analysis
 - d) Loglinear Models
 - e) Time series analysis
 - f) Partial and Part Correlations
- 7) Check-in about project progress