Business Administration

Course Number:	**BUAD 315**
Course Title:	**MANAGEMENT SCIENCE**
Credits:	3
Calendar Description:	Management science is a discipline that aids decision-making by applying a scientific approach to managerial problems. This course discusses quantitative methods and their extensive applications in business. Topics include linear programming, project scheduling, waiting line models, inventory management, simulation, Markov process, decision analysis, and forecasting. Use of computer software is an integral part of this course *(also offered by Distance Education).*
Semester and Year:	**FALL 2023**
Prerequisite(s):	STAT 124 or 121 and minimum third-year standing
Corequisite(s):	No
Prerequisite to:	BUAD 491
Final Exam:	Yes
Hours per week:	3
Graduation Requirement:	BBA - Required
Substitutable Courses:	No
Transfer Credit:	
Special Notes:	
Originally Developed:	February 2000
EDCO Approval:	February 2000
Chair's Approval:	

Professors

Name	Phone number	Office	Email
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Learning Outcomes

Upon completion of this course students will be able to

- explain the scientific approach of how to apply systematic methodologies in solving managerial problems that guide decision making.
- identify and apply appropriate techniques for managing business problems and correctly interpret the results of analysis through critical thinking.
- recognize and explain specific problems including their components and assumptions and solve them using linear programming.
- use MS Excel to create quantitative models of management problems and insert appropriate statistical functions in Excel.
- solve typical problems using formulas and tables.

Course Objectives

This course will cover the following content: See weekly course schedule.

Evaluation Procedure

Assignments and Quizzes	20%
Mid-term Exam*	40%
Final Exam*	40%
Total	100%

* Students must earn half of all available exam marks to achieve a passing grade in the course.

Notes

There will be no make-up or supplementary exams.

Required Texts/Resources

Anderson, D. R., Sweeney, D. J., Williams, T. A., Camm, J.D., & Martin, K. (2015). Quantitative Methods for Business (13th ed.), Cincinnati, OH: South-Western
Students require access to Microsoft EXCEL. Students will have optional access to TreePlan EXCEL add-in.

Course Schedule

Date		Topic	Textbook
2023 Week of		Wednesday September 6, First day of class Friday September 15, Last day to register for Fall 2023 Monday Oct. 2 & Monday Oct. 9 & Monday Nov. 13, Statutory Holiday (no classes) Friday October 27, Last day to withdraw from class without academic penalty Thursday December 7, Last day of class	**Chapter(s):**
1	Sept. 4	Introduction to Management Science	Ch 1 App 1.1, 1.2
2	Sept. 11	Probability Distributions Self Study: Ch 3: Q 1, 3, 4, 9, 14, 18, 24, 29, 30	Ch 3
3	Sept. 18	Decision Analysis Self Study: Ch 4: 1, 3, 5, 7, 8, 14, 16 (where possible, use MS or Excel to solve these problems; use EXCEL for #16a)	Ch 4 App 4.1
4	Sept. 25	Introduction to Forecasting Self Study: Ch 6: 5, 7, 8, 9, 13, 17 (where possible use MS or Excel to solve these problems)	Ch 6
5	Oct. 2	Introduction to Linear Programming (LP) Self Study: Ch 7: 2, 7 by hand Ch 7: 13, 31, 35, 42, 43 (use MS or EXCEL for 13c, 31, 35b, 42 & 43)	Ch 7 App 7.1, 7.3
6	Oct. 9	LP Sensitivity Analysis Self Study: Ch 8: 1, 2, 5, 6, 10, 12, 13 (use MS or EXCEL to solve the LP for #1 & 2)	Ch 8 App 8.1
7	Oct. 16	Distribution and Network Models Self Study: Ch 10: 1, 2, 6, 9, 17 (use MS or Excel to solve 2b & 17c)	Ch 10
9	Oct. 23	**Midterm exam, Chapters 3, 4, 6, 7 & 8**	Ch 1-8
10	Oct. 30	Integer Linear Programming Self Study: Ch 11: 2, 7a–7c, 13	Ch 11
11	Nov. 6	Project Management Self Study: Ch 13: 3, 6, 10, 13, 21	Ch 13
12	Nov. 13	Waiting Line Models; Self Study: Ch 15: 5, 11, 18, 21, 24, 27, 30, 34 (use MS to solve these problems)	Ch 15
12	Nov. 20	Simulation Self Study: Ch 16: 2, 8, 10, 14, 18	Ch 16 App 16.1
13	Nov. 27	Markov Processes Self Study: Ch 17: 3, 8, 13	Ch 17
14	Dec. 4	Exam review	
Dec	Dec.11–Dec. 20	**Final Exam Period (Chapters 10, 11, 13, 15, 16, 17)**	

SKILLS ACROSS THE BUSINESS CURRICULUM

The Okanagan School of Business promotes core skills across the curriculum. These skills include reading, written and oral communications, computers, small business, and academic standards of ethics, honesty and integrity.

STUDENT CONDUCT AND ACADEMIC HONESTY

What is the Disruption of Instructional Activities?

At Okanagan College (OC), disruption of instructional activities includes student "conduct which interferes with examinations, lectures, seminars, tutorials, group meetings, other related activities, and with students using the study facilities of OC", as well as conduct that leads to property damage, assault, discrimination, harassment and fraud. Penalties for disruption of instructional activities include a range of sanctions from a warning and/or a failing grade on an assignment, examination or course to suspension from OC.

What is Cheating?

"Cheating includes but is not limited to dishonest or attempted dishonest conduct during tests or examinations in which the use is made of books, notes, diagrams or other aids excluding those authorized by the examiner. It includes communicating with others for the purpose of obtaining information, copying from the work of others and purposely exposing or conveying information to other students who are taking the test or examination."

Students must submit independently written work. Students may not write joint or collaborative assignments with other students unless the instructor approves it in advance as a group/team project. Students who share their work with other students are equally involved in cheating.

What is Plagiarism?

Plagiarism is defined as "the presentation of another person's work or ideas without proper or complete acknowledgement." It is the serious academic offence of reproducing someone else's work, including words, ideas and media, without permission for course credit towards a certificate, diploma, degree and/or professional designation. The defining characteristic is that the work is not yours.

"Intentional plagiarism is the deliberate presentation of another's work or ideas as one's own." Intentional plagiarism can be a copy of material from a journal article, a book chapter, data from the Internet, another student, work submitted for credit in another course or from other sources.

"Unintentional plagiarism is the inadvertent presentation of another's work or ideas without proper acknowledgement because of poor or inadequate practices. Unintentional plagiarism is a failure of scholarship; intentional plagiarism is an act of deceit."

What are the Students' Responsibilities to Avoid Plagiarism?

Students have a responsibility to read the OC Plagiarism Policy and Procedures outlined in the OC calendar, which is available in online format www.okanagan.bc.ca. Students must acknowledge the sources of information used on all their assignments. This usually involves putting the authors' name and the year of publication in parentheses after the sentence in which you used the material, then at the end of your paper, writing out the complete references in a Reference section.

"Students are responsible for learning and applying the proper scholarly practices for acknowledging the work and ideas of others. Students who are unsure of what constitutes plagiarism should refer to the UBC publication "*Plagiarism Avoided; Taking Responsibility for your Work".* This guide is available in OC bookstores and libraries.

Students are expected to understand research and writing techniques and documentation styles. The Okanagan School of Business requires the use of the APA or MLA style, but suggests that students cite references using the APA guidelines (see Publication Manual of the American Psychological Association, 7th edition (2019). A copy of the APA manual is available in the reference section and also available for circulation from OC libraries. The library website has access to these two major citing styles.

What are the Penalties for Plagiarism and Cheating?

The Okanagan School of Business does not tolerate plagiarism or cheating. All professors actively check for plagiarism and cheating and the Okanagan School of Business subscribes to an electronic plagiarism detection service. All incidents of plagiarism or cheating are reported and result in a formal letter of reprimand outlining the nature of the infraction, the evidence and the penalty. The Dean of the Okanagan School of Business and the Registrar record and monitor all instances of plagiarism and cheating. Penalties for plagiarism and cheating reflect the seriousness and circumstances of the offence and the range of penalties includes suspension from OC.