BUS 270 Section 001_Fall 2018
Introduction to Quantitative Analysis

1. Class time: Ru-Th from 8:30 am to 9:45 am in ED 193
2. Instructor: Romulus Cismaru
3. Office: 540.9 Education Building
4. Office phone: 306 - 585 - 4040 (all important communication should be sent in written form and on UR courses email)
5. E-mail: Romulus.Cismaru@uregina.ca or UR Courses mail (preferred)
6. Office hours: by appointment
8. Course summary: BUS 270 is an introduction to the use of quantitative modeling techniques as an aid to Managerial Decision-Making. Emphasis will be on formulation, solution, and sensitivity analysis of the results. This is an application-oriented course and we will work plenty of problems in the class. Please note that the authors have put the answers to the even numbered and “Self Test” problems in Appendix E at the back of the book. You will be expected to work on your own without consulting the answers and then check your work. Doing problems does have a significant impact on your performance and on your grade, so work as many problems as you can.
9. Course objective: The course will introduce you to a number of the more common mathematical modeling approaches used in practice and will help you develop an understanding of the quantitative solving methods.
10. Prerequisites: BUS 100, MATH 103 and STAT 100. Students must be competent with concepts of algebra, calculus and statistics.
11. Preparation time: The common rule of thumb regarding university studying is that for each class, students should spend approximately 2-3 hours of study time for each hour that they spend in class. Since we will have 2 classes every week (75 minutes each or 2.5 hours per week) you are expected to spend approximately 5-7.5 hours per week studying for BUS 270. Please plan ahead your study time and make sure you do a realistic assessment of your commitments for the semester (family, university classes, work, vacation, etc).

12. Methods of Evaluation:

<table>
<thead>
<tr>
<th>No</th>
<th>Type</th>
<th>Date</th>
<th>Duration</th>
<th>Covers</th>
<th>Details</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MT 1</td>
<td>Th, Oct 4</td>
<td>75 min</td>
<td>Material up to date</td>
<td>Closed book</td>
<td>30%</td>
</tr>
<tr>
<td>2</td>
<td>MT 2</td>
<td>Th, Nov 15</td>
<td>75 min</td>
<td>Material after MT1</td>
<td>Closed book</td>
<td>30%</td>
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<tr>
<td>3</td>
<td>Final Exam</td>
<td>Tu, Dec 18 9:00 am - 12:00 pm</td>
<td>180 min</td>
<td>Comprehensive</td>
<td>Closed book</td>
<td>40%</td>
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<td>Total</td>
<td>100%</td>
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</table>

13. Important information concerning exams.
   a. Bring your student ID with you to all examinations and put it on your desk.
   b. Clarity, Neatness, Numerical Accuracy and Consistency are all important qualities that will influence your grade in the exams.
c. In the examinations you are allowed to use a basic scientific calculator (you will need only the following functions: addition, subtraction, multiplication, division, power and square root). Any other electronic devices (notebooks, electronic translators, cell phones, programmable calculators, financial calculators, palm-pilots, info-red devices, etc) are not allowed. If you have doubts if your calculator complies with this rule please check with me.

d. All answers to problems in the examinations must be properly explained and justified; no grade will be awarded for unexplained results even if they are correct. You must show all your work.

e. An excused absence for a midterm exam may be granted to students on the basis of illness, accident, or other extreme circumstances beyond their control. Supporting documentation is required and must be submitted before an excused absence is approved. You must submit the supporting documentation to the instructor in maximum one week from the day of the examination (no exceptions under any circumstances). If a doctor’s note is presented the note has to specify that the student was unable to take the test on the scheduled date due to illness. An appointment card is not considered valid documentation.

f. If a student is granted an excused absence for a midterm the weight of that examination will be added to the weight of the Final Exam.

g. Extensions on writing the Final Exam may be granted to students on the basis of illness, accident, or other extreme and legitimate circumstances beyond their control. The authority to approve deferrals of final examinations rests with the Associate Dean Undergraduate in the student's Faculty. Supporting documentation is required and must be submitted before a deferral is approved. To be granted a deferred Final Exam a student has to be in good standing (passing marks) in the class.

h. Please read the syllabus carefully and note the grading system. The weights and dates for examinations presented in the syllabus will not be changed under any circumstances. There will be no make up work or extra credit work available in this class. Students must understand that the weight for examinations is non-negotiable. The weight for each examination will not be changed under any circumstances.

14. Class policies: As this is a business course, a high level of professionalism is expected from all students. In addition to abiding by the regulations of the University of Regina, the following are standard expectations:

a. As a courtesy to your fellow students and your instructor, please turn off all your electronic devices and put them aside before class begins. That includes your laptops, phones, i-Phones, Black-Berries, i-Pods, i-Pads etc. Recording of any kind or taking pictures in class is not allowed.

b. Please be on time for class. Similar to a business meeting or presentation, it is unprofessional to arrive late or leave early.

c. Please ensure that you are prepared to actively participate in the class by reading the materials (chapters from the text book, class problems) and/or completing assigned problems in advance.

d. It is required that you bring the text book, a calculator, several rulers and graph paper with you for all classes.

e. Please refrain from talking unless it is to make a direct contribution to class. Side conversations are disruptive to other students and the instructor and will not be permitted. Other unacceptable behaviour would include reading or working on material unrelated to the class, text messaging, checking emails, internet surfing, etc.

15. Academic and Non-Academic Misconduct

a. Students enrolled in BUS courses at the U of R are expected to adhere rigorously to principles of intellectual integrity. Plagiarism or cheating on examinations is a serious offence and will result in a zero grade on that test, a failing grade in the course and expulsion from the university.
b. For information about Academic and Non-Academic Misconduct please consult the Regulations Governing Discipline for Academic and Non-Academic Misconduct at the University of Regina 2018-2019 Undergraduate Calendar.

16. Other general information:
   a. Grades: All grades will be posted on UR Courses.
   b. Class attendance: Regular class attendance is encouraged since it helps students understand better the material.
   c. UR Courses: In this class we will use UR Courses extensively. Chapter Slides, Class Problems, Reviews, grades, important messages, discussion boards, etc will be posted on UR Courses. Make sure you check UR Courses for BUS 270 before every class.

17. Special accommodations: If you require special accommodations of any kind because of a disability, please inform me at the beginning of the semester and also contact the Coordinator of Centre for Student Accessibility at 306-585-4631. Please come to discuss with me about your accommodation letter as soon as possible.

18. Other specifications
   a. If necessary, I will change aspects of the information in this syllabus. If I do, I will notify you in class.
   b. I will assume that every student who remains enrolled in the course after the syllabus has been distributed has fully understood the grading system, the examination dates and the class policy.

### Tentative Course Outline

<table>
<thead>
<tr>
<th>Task</th>
<th>Ch.</th>
<th>Topic</th>
<th>Assigned Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MATH 103</td>
<td>Syllabus, Mathematical Review of the following concepts: equation, slope of a line, function, equation, inequality, range of feasibility for an inequality.</td>
<td>Syllabus, MATH 103</td>
</tr>
<tr>
<td>2</td>
<td>Ch. 1</td>
<td>Introduction: Quantitative Analysis and Decision Making, Models of Cost, Revenue and Profit.</td>
<td>Ch. 1</td>
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<tr>
<td>3</td>
<td>Ch. 2</td>
<td>An Introduction to Linear Programming (LP): A Maximization Problem, Graphical Solution Procedure, Feasible Region, Extreme Points and the Optimal Solution, A Minimization Problem, Special Cases, Computer Solution, LP Notation.</td>
<td>Ch. 2</td>
</tr>
<tr>
<td>4</td>
<td>Ch. 3</td>
<td>Linear programming: Sensitivity Analysis and Interpretation: Graphical Solution, Range of Optimality, Reduced Cost, Dual Price, Slack and Surplus Variable, Standard Form, LP Format, Range of Feasibility, 100 % rule, Computer Solution.</td>
<td>Ch. 3</td>
</tr>
<tr>
<td>5</td>
<td>Ch. 4</td>
<td>LP Applications: Marketing Applications, Financial Applications, Operations Management Applications.</td>
<td>Ch. 4</td>
</tr>
<tr>
<td>6</td>
<td>Ch. 6</td>
<td>Distribution and Network Models: Transportation, Assignment, Transhipment, Shortest Route, Maximal Flow, Production and Inventory Applications.</td>
<td>Ch. 6</td>
</tr>
<tr>
<td>7</td>
<td>Ch. 10</td>
<td>Inventory Models: EOQ, EPLS, Planned Shortages, Quantity discounts, Probabilistic Demand Models.</td>
<td>Ch. 10</td>
</tr>
<tr>
<td>8</td>
<td>Ch. 13</td>
<td>Decision Analysis: Formulation, Decision Making with/without Probabilities, Risk Analysis, Decision Analysis with Sample Information, Computing Branch Probabilities, Bayes’ Theorem.</td>
<td>Ch. 13</td>
</tr>
<tr>
<td>9</td>
<td>Ch. 7</td>
<td>Integer Linear Programming: Types, Graphical and Computer Solution for an all integer LP, Applications with 0-1 variables.</td>
<td>Ch. 7</td>
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*Please contact me for any questions or concerns you might have.*
University of Regina

Counselling Services

Feeling Stressed? Always worried?

Some stress is normal when you’re going to university but 1 in 5 students will suffer from enough distress that they would benefit from counselling.

What can I do?

The U of R offers several counselling services free of charge for students at the U of R. These sessions are confidential and easy to access for students – simply go to the second floor of Riddell, Room 251 to make an appointment.

When should you go?

Knowing when to schedule an appointment can be tough. Some common issues you might need help with include test anxiety, if you’ve experienced a trauma like losing a family member or a close friend, or if you’ve recently ended a relationship.

If the feelings you’re experiencing are more intense and severe counselling services can also provide urgent service within 3 days and referrals as needed.

What options are available for me?

**Personal Counselling** – This is a great option if you’d like one on one attention for things like anxiety and panic, relationship conflict, depression, grief and loss, academic issues, body image and substance abuse. Up to 5 sessions are free per semester. Try it – talking about your problems can be more helpful than you might think!

**Group Counselling** – Simply put, you’re not alone. Many students are experiencing the same things as you. The U of R offers a wide variety of group counselling opportunities that can help teach many skills for managing your mental health, including: Meditation and relaxation, Healthy relationships, Stress Management and Self-Care.

But I can’t afford counselling...

Seeking counselling doesn’t have to be cost prohibitive. Many students can benefit from the 8 free sessions offered by the University as a benefit of being a student.

If you need more sessions make sure you contact URSU and visit [www.iHaveAPlan.ca](http://www.iHaveAPlan.ca). Many expenses that are related to mental health, including going to a psychologist, are partially covered by your Student Health and Dental Plan!

What else can I do?

Self-care - taking better care of yourself, can help you out. Eating better, working out, smoking and drinking less and balancing school with fun can all help with mental health!

Have a problem but don’t know how to fix it?

**URSU’s Student Advocate can help you free of charge!**

- Academic Appeals
- Disciplinary Appeals
- Student Loan Appeals
- E-mail advocate@ursu.ca to schedule an appointment today!