



## Syllabus

### SCHOOL OF BUSINESS AND MANAGEMENT

## BUS 448: Strategic Decision Making Under Uncertainty

5 Credits

Effective: Spring 2020/2021

*Access to the Internet is required.*

*All written assignments must be in Microsoft-Word-compatible formats.*

*See the library's APA Style Guide tutorial for a list of resources that can help you use APA style.*

## FACULTY

Faculty Name: FACULTY NAME

Contact Information: CONTACT INFORMATION

[INSTRUCTOR MAY INSERT PERSONAL MESSAGE IF DESIRED]

## COURSE DESCRIPTION

This course introduces the basic concepts, principles, and techniques of strategic decision making under uncertainty. Students will learn how to model complex business problems that involve risk and uncertainty with the help of spreadsheet functions and add-ins. The design of this course is centered on analytical models, such as Regression Analysis, Time Series, Decision Tree, Simulation & Optimization, and Dynamic Optimization. An emphasis is placed on model formulation and interpretation of results.

## COURSE RESOURCES

Required and recommended resources to complete coursework and assignments are found on the course [Reading List](#). The reading list can be found under *Course Information* in Blackboard as well as from the library homepage (“Find Your Textbook” button).

**Note:** Required resources that must be purchased by the student are tagged “Purchase from a vendor of your choosing.” Required resources with a direct link, “Available through CityU Library”, are available electronically at no cost to students.

Students in Canada may purchase course resources from the [Canada Bookstore](#), and students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

Textbook:

Albright, S. C., & Winston, W. L. (2017). *Business analytics: data analysis & decision making*. Mason, OH: Cengage Learning.

## CITYU LEARNING GOALS

This course supports the following City University learning goals:

- Professional competency and professional identity
- Lifelong learning

## COURSE OUTCOMES

In this course, learners:

- Analyze business problems that involve uncertainty.
- Gain insight into the scope of management problems that can be addressed with stochastic optimization models.

- Identify value-creating opportunities using simulation and optimization models.
- Develop models to enhance decision making under uncertainty within an organization.
- Explain problems through data and perform logical analyses.
- Assess the significance of model outputs for managerial insights and actions.

## CORE CONCEPTS, KNOWLEDGE, AND SKILLS

- Decision making and BI
- Regression analysis
- Time-series forecasting
- Optimization modeling
- Simulation modeling
- Excel
- Experimental design

## OVERVIEW OF COURSE GRADING

The grades earned for the course will be derived using City University of Seattle’s decimal grading system, based on the following:

<i>Overview of Required Assignments</i>	<i>% of Final Grade</i>
Instructor Determined Assignments and Activities	20%
Mini-Case Studies (4)	60%
Final Case Study	20%
<b>TOTAL</b>	<b>100%</b>

## SPECIFICS OF COURSE ASSIGNMENTS

The instructor will provide grading rubrics that will provide more detail as to how this assignment will be graded.

### Instructor Determined Assignments and Activities

Whether in class, online, or in a mixed mode setting, students will be graded on their participation in classroom discussions; ability to present, explain, or defend alternative viewpoints; and the degree to which they have mastered the concepts and principles inherent in the study of business management. Written work will be assessed not only on relevance to the subject presented, but also on adherence to good written form, APA style, and professional presentation. The instructor may also choose to create additional activities to support learning in the classroom or online.

<i>Components</i>	<i>% of Grade</i>
Quality of Responses	40%
Quantity of Responses	40%
Timeliness	20%
<b>TOTAL</b>	<b>100%</b>

### Mini-Case Studies (4)

The instructor will provide four (4) mini-cases to students throughout the quarter. The cases are designed to encourage students to apply analytical concepts and tools to analyze and solve real-world scenarios. Examples of these concepts and tools include decision tree, one stage and multistage decision, risk aversion, expected utility maximization, sensitive and regression analysis, and time-forecasting. The requirements for each case will vary depending upon the nature of the scenario of interest. Accordingly, specific instructions and set of requirements will be included in the description of each case.

<i>Components</i>	<i>% of Grade</i>
Analysis	40%
Application of Analytics Tools	40%
Visual Representation of Data	20%
<b>TOTAL</b>	<b>100%</b>

### Final Case study

The instructor will present a scenario that involves business or social challenges. Using data and analytics techniques such as regression and decision tree, students will identify and analyze business problems related to the case and develop a proper decision framework to proceed from information to choices that inform actions and outcomes. The requirements for the case will vary depending upon the nature of the scenario of interest. Accordingly, specific instructions and set of requirements will be included in the description of the case. Below are guidelines to help students understand and prepare for the case study:

<b>Process/Steps</b>	<b>Corresponding Action Items</b>
<b>Read and Examine the Case Thoroughly</b>	Take notes, highlight relevant facts, underline key problems.
<b>Focus Your Analysis</b>	Identify two to five key problems and Answer some questions: - Why do we have to analyze? - What business objects and process involved? - How does your analysis impact the organization? - Who are the report readers?
<b>Uncover Possible Solutions/Changes Needed</b>	Review course readings, discussions, outside research, your experience
<b>Select the Best Solution/Information Presentation</b>	Consider strong supporting evidence, pros, and cons. Is this solution realistic? Or Do these outcomes help to clarify the problem?

<i>Components</i>	<i>% of Grade</i>
Analysis	40%
Application of Analytics Tools	30%
Decision	10%
Organization and Coherence	10%
Visual Representation of Data	10%
<b>TOTAL</b>	<b>100%</b>

## **COURSE POLICIES**

### **Late Assignments**

A critical aspect of management is to meet predefined deadlines. Therefore, all assignments are expected to be submitted when due. No late assignments are accepted. Life-situations do occur. When an issue arises coordinate with the instructor PRIOR TO the assignment's due date and the due date may be adjusted. It is in the best interest of the student to ensure that all assignments are submitted on time.

### **Participation**

Class participation will be evaluated during class. Participation includes being prepared for class discussions and contributing meaningful content when appropriate. It also includes individual effort contributed to team projects.

### **Professional Writing**

Assignments require error-free writing that uses standard English conventions and logical flow of organization to address topics clearly, completely, and concisely. CityU requires the use of APA style.

## **UNIVERSITY POLICIES**

Students are responsible for understanding and adhering to all of City University of Seattle's academic policies. The most current versions of these policies can be found in the [University Catalog](#) that is linked from the CityU Web site.

### **Antidiscrimination**

City University of Seattle and its staff and faculty are committed to supporting our students. We value equity, diversity, and inclusion as a way of life as well as the educational opportunities it provides. CityU will not tolerate any form of discrimination based on race, color, ethnicity, sexual orientation, gender identification, socioeconomic status, or religious values. If you have experienced any discrimination based on any of the above, we encourage you to report this to the University. Please report this to your instructor. If you do not feel safe reporting this to your instructor, please report to the Provost or to the Vice President of Student Affairs.

### **Non-Discrimination & Prohibition of Sexual Harassment**

City University of Seattle adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University is committed to ensuring that the education environment is bounded by standards of mutual respect and safety and is free from discriminatory practices.

In the U.S., the University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex include sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status. Sexual harassment, sexual assault, dating and domestic violence, and stalking are forms of sex

discrimination, which are prohibited under Title IX and by City University of Seattle policy. City University of Seattle also prohibits retaliation against any person opposing discrimination or participating in any discrimination investigation or complaint process internal or external to the institution. Questions regarding Title IX, including its application and/or concerns about noncompliance, should be directed to the Title IX Coordinator. For a complete copy of the policy or for more information, visit <https://my.cityu.edu/titleix> or contact the Title IX Coordinator.

In Canada, in compliance with the British Columbia Human Rights Code, the Alberta Human Rights Act, WorksafeBC, and the Workers' Compensation Board of Alberta, the University believes that its environment should at all times be supportive and respectful of the dignity and self-esteem of individuals. Discrimination, harassment and bullying conduct, whether through person to person behaviour or via electronic communications such as email or social media is not acceptable and will not be tolerated. As an educational institution, it is our responsibility to cultivate an environment of excellence, equity, mutual respect and to recognize the value and potential of every individual. The University will take all necessary steps to meet or exceed the requirements of the law to prevent discrimination, harassment and bullying. The Respectful Workplace Policy for the prevention of discrimination, harassment and bullying policy and procedure can be found at <https://www.cityu.edu/discover-cityu/about-cityu/> under the Policies section or at <https://www.cityuniversity.ca/about/>.

### **Religious Accommodations**

City University of Seattle has a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The University's policy, including more information about how to request an accommodation, is available in the University Catalog and on the my.cityu.edu student portal. Accommodations must be requested by the 20% mark of this course (e.g. day 14 of a ten-week course, day 7 of a 5-week course) using the Religious Accommodations Request Form found on the student dashboard in the my.cityu.edu student portal.

### **Academic Integrity**

Academic integrity in students requires the pursuit of scholarly activity that is free from fraud, deception and unauthorized collaboration with other individuals. Students are responsible for understanding CityU's policy on academic integrity and adhering to its standards in meeting all course requirements. A complete copy of this policy can be found in the [University Catalog](#) under *Student Rights and Responsibilities* on the page titled *Academic Integrity Policy*.

### **Attendance**

Students taking courses in any format at the University are expected to be diligent in their studies and to attend class regularly.

Regular class attendance is important in achieving learning outcomes in the course and may be a valid consideration in determining the final grade. For classes where a physical presence is required, a student has attended if they are present at any time during the class session. For online classes, a student has attended if they have posted or submitted an assignment. A complete copy of this policy can be in the [University Catalog](#) under *Student Rights and Responsibilities* on the page titled *Attendance*.

## **Final Assignment Due Date**

Final assignments for each class at CityU must be due on or before the final date of the course as indicated in the university's course information system. Due dates that extend beyond the final date of the course may negatively impact tuition funding for students.

## **SUPPORT SERVICES**

### **Disability Services Accommodations Statement**

Students with a documented disability who wish to request academic accommodations are encouraged to contact Disability Support Services to discuss accommodation requests and eligibility requirements. Please contact Disability Support Services at [disability@cityu.edu](mailto:disability@cityu.edu) or 206.239.4752 or visit the [Disability Support Services](#) page in the my.cityu.edu portal. Confidentiality will be observed in all inquiries. Once approved, information about academic accommodations will be shared with course instructors.

### **Library Services**

CityU librarians are available to help students find the resources and information they need to succeed in this course. Contact a CityU librarian through the [Ask a Librarian](#) service, or access [library resources and services online](#), 24 hours a day, seven days a week.

### **Smarthinking Tutoring**

CityU students have access to free online tutoring offered through Smarthinking, including writing support, from certified tutors 24 hours a day, seven days a week. Contact CityU's Student Support Center at [help@cityu.ed](mailto:help@cityu.ed) to request a user name and password.