# CityUniversity
of Seattle

| Syllabus |
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**SCHOOL OF BUSINESS AND MANAGEMENT**
BUS 426: Business Analytics for Decision Making

5 Credits
Effective: Winter 2018/2019

# FACULTY

Faculty Name: FACULTY NAME

Contact Information: CONTACT INFORMATION

[INSTRUCTOR MAY INSERT PERSONAL MESSAGE IF DESIRED]

# COURSE DESCRIPTION

Today's business professionals need to be skilled in the acquisition and analysis of relevant data sets that can be utilized to drive business strategy. An emphasis is placed on the process of gathering, analyzing, and presenting data in a way that can drive strategic decision-making in modern organizations. This course examines current trends in transactional and dynamic data generation and draws upon quantitative tools to make sense of the data for market and managerial purposes. Students will learn to use common analysis methods to summarize and interpret results for the benefit of internal and external consumers.

# 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.

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 at no cost to students.

Students in Canada will see required resources they need to purchase tagged "Purchase from the Canadian Bookstore." Students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

# CITYU LEARNING GOALS

This course supports the following City University learning goals:

- Diverse and global perspectives

# COURSE OUTCOMES

In this course, learners:
- Critically analyze the quality of data analysis results as they relate to business opportunities.
- Clarify the current state of an organization through descriptive analytics.
- Apply data analytic tools including regression, classification, optimization and clustering.
- Identify useful data sources that can inform and support innovative management decisions.
- Formulate and communicate business recommendations that are supported by data analysis and that incorporate common visualization methods.

# CORE CONCEPTS, KNOWLEDGE, AND SKILLS

- Classification
- Clustering
- Critical Analysis of Models
- Data Science
- Descriptive Analytics
- Forecasting
- Machine Learning
- Optimization
- Predictive Analytics
- Predictive Models
- Prescriptive Analytics
- Regression
- Structured Data
- Supervised Learning
- Unstructured Data
- Unsupervised Learning

# 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:

| Overview of Required Assignments | % of Final Grade |
|---|---|
| Final Analysis Project | 35% |
| Weekly Assignments | 40% |
| Discussions | 25% |
| **TOTAL** | **100%** |

# SPECIFICS OF COURSE ASSIGNMENTS

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

Final Analysis Project (Data and Case)

Students will be provided with a data set that contains business records from a company's past transactions. They will also be provided with a scenario that describes a set of problems related to the business practices that generated this data.

Students must provide details to show how the B.A.D.I.R. model will be followed to ensure that they are able to fully understand the data problem / opportunity and to work with key stakeholders in optimizing the analysis in a way that supports leadership and furthers the institution's mission.

Students are also to evaluate the data file and decide how best to analyze the data based on the scenario

that they have been provided. They will then conduct their analysis by running three data mining strategies that produce defendable and significant results.

Using the results of each of the three analyses, students will also select and produce three MS Excel visualizations that show the significant of the results. Lastly, the analyses, their results, and the related visualizations are to be used to produce a persuasive argument in the form of an 8-10 page report that will describe any recommended actions to fully address the problems described in the initial scenario.

| Components | % of Grade |
|---|---|
| Data analytic tools | 33% |
| Use of BADIR model | 33% |
| Results and Visualization | 33% |
| **TOTAL** | **100%** |

Weekly Formative Assignments

Throughout this course students will learn how to use pivot tables, clustering, classification, optimization, regression, ensemble models, forecasting and strategies for dealing with outliers. To support their learning, students will complete a weekly assignment for each topic in which they will conduct analysis on sample data and produce a visualization that shows a summary of the analysis results. Both their analysis and their visualization are to be submitted each week as the weekly assignment.

| Components | % of Grade |
|---|---|
| Analytic Process (Data analytic tools) | 40% |
| Visualization Tools (Results and Visualization) | 40% |
| Critical Analysis | 10% |
| Use of course concepts | 10% |
| **TOTAL** | **100%** |

Discussions

Students will engage in discussions in which they will build a knowledge base about five topics related to business analytics. Topics will include current trends that relate to the use of data and analytics in a business environment. For each topic, students will be asked to find one current, relevant source that they can bring back to the class along with their full description of what that source has revealed about the topic.

| Components | % of Grade |
|---|---|
| Quality of Responses | 100% |
| **TOTAL** | **100%** |

# 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

You 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.

**Non-Discrimination & Prohibition of Sexual Misconduct**
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 in the section titled Academic Integrity Policy under Student Rights & Responsibilities.

**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 found in the University Catalog in the section titled Attendance under Student Rights & Responsibilities.

**Final Assignments 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 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 or 206.2369.4752 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 your 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 24/7 access to free online tutoring offered through Smarthinking, including writing support, from certified tutors. Contact CityU's Student Support Center at mycityusupport@cityu.edu to request a username and password.