



## Syllabus

### **SCHOOL OF BUSINESS AND MANAGEMENT**

### **BUS 446: Data Visualization and Dashboards**

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

Analysis of data sets will be more effective if the information discovered is accurately conveyed to key organizational stakeholders. This class focuses on the best way to communicate the information that the data analysis is trying to tell. The course starts by teaching students best practices for telling stories with data and then turns its focus on using Tableau to set up data visualizations and dashboards. Students will complete the course with a full understanding of how to communicate data using Tableau.

## 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.

## COURSE OUTCOMES

In this course, learners:

- Interpret information about organizational data in terms of its usefulness in strategic process decisions.
- Present data and analyses to stakeholders in a format that is clear and informative.
- Apply push and pull approaches to analytics reporting.
- Build visualizations and dashboards that managers can use to evaluate organizational performance and make strategic decisions.

## 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>
Discussion Board	20%
Weekly Tableau Projects	40%
Storytelling Presentation Project	10%
Presentation / Report Analysis	10%
Final Dashboard Project	20%
<b>TOTAL</b>	<b>100%</b>

## SPECIFICS OF COURSE ASSIGNMENTS

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

### Weekly Tableau Projects

Students will develop and sharpen data visualization and dashboarding skills using Tableau. In the early weeks, students will focus on presenting data visuals that are based on files that are provided. Later, they will be building dashboards that show the relationships between different parts of the data. They will communicate the meaning and utility of these dashboards using data storytelling skills.

All of these assignments will build in complexity to prepare students for their final project which will be to build a storytelling dashboard for a large dataset.

<i>Components</i>	<i>% of Grade</i>
Storytelling with Data	25%
Organization and Coherence	25%
Visual Representation of Data	50%
<b>TOTAL</b>	<b>100%</b>

### Storytelling Presentation Project

Students will be provided with a data file. They are to analyze the data file and draw some conclusions based on what they find in the file.

Then, they are to put together a PowerPoint presentation that shares the story they think the data is trying to tell.

The PowerPoint presentation should:

1. Have an introduction slide
2. Have 3-5 slides that tell the story

3. Use the best practices that they have learned from their study of data storytelling practices.
4. Assume the audience is not familiar with the data or the story that it tells
5. Have notes on each slide (except the introduction slide) where more details about the story are provided.

<i>Components</i>	<i>% of Grade</i>
Quality of the Presentation	50%
Data Analysis	25%
Use of course concepts	25%
<b>TOTAL</b>	<b>100%</b>

### Presentation / Report Analysis

The instructor will provide students with an example report, one that has been used in the business world.

Based on what students have learned about best practices in communicating data, they will write critique of the report. They are to answer the following questions:

1. What is designed well? Why do you think it is designed well?
2. What needs to be changed / fixed? Why do you think that it does not work?
3. How might you change this report?
4. Does this report tell a story? Could it be told better?

Students are to provide 3-5 page written analysis of the sample report. They must include a title page and a reference page (beyond the 3-5 pages of analysis that are to be provided).

Students are to include clear references to what they have learned / read that lead them to indicate that things work well or need to be changed in the sample report.

<i>Components</i>	<i>% of Grade</i>
Critical Analysis	40%
Style and Mechanics	10%
Critique of the Report	50%
<b>TOTAL</b>	<b>100%</b>

### Final Dashboard Project

In this final culminating assignment, each student will build their own dashboard. Ideally, this will be a dashboard using data that might have come from the student's job or their own personal use. Students will be allowed to select their own dataset to make this as meaningful and relevant as they can. Those students who do not have access to an appropriate dataset will be provided with one from the instructor.

Regardless of the dataset that the student chooses, they are to use best practices to build a dashboard that conveys useful information from their analysis. By this time, all students have had a chance to practice building dashboards so this is a continuation of that process. The task is to analyze the data file in Tableau to build a dashboard that can be presented to communicate a story and/or persuade an audience to take

action.

To do this students must:

1. Become familiar with the data. What is in it? What story is it telling? What does it convey?
2. Build at least four visuals that are combined into a dashboard.
3. Ensure that the dashboard shows all visualizations in a logical form that helps tell the story.
4. Write an accompanying paper that tells the story. This could be the script of a presentation. The paper should describe each of the visuals in sufficient detail including details on how they come together to become a dashboard that tells the story.

Success on this final project will be based on the quality of the presentation and the accompanying paper. Do they follow the best practices of data storytelling? Do the visuals render correctly? Do they support the story?

<i>Components</i>	<i>% of Grade</i>
Quality of the Dashboard	50%
Final Dashboard Paper	30%
Style and Mechanics	20%
<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.