



COLORADO STATE UNIVERSITY
— GLOBAL —

MKG520: CAPSTONE: MANAGEMENT OF MARKET RESEARCH & DIGITAL ANALYTICS

Credit Hours: 3

Contact Hours: This is a 3-credit course, offered in accelerated format. This means that 16 weeks of material is covered in 8 weeks. The exact number of hours per week that you can expect to spend on each course will vary based upon the weekly coursework, as well as your study style and preferences. You should plan to spend 14-20 hours per week in each course reading material, interacting on the discussion boards, writing papers, completing projects, and doing research.

Faculty Information: Faculty contact information and office hours can be found on the faculty profile page.

COURSE DESCRIPTION AND OUTCOMES

Course Description:

This course is an exploration of the essentials of business strategy development with a focus on innovation and inherent challenges associated with strategy creation and implementation. The course focuses on setting strategy, developing market opportunity analysis, and establishing organizational goals with consideration of internal and external resources, market opportunities, and return on investment. Topics include strategy, market opportunity analysis, market research, the use of new technologies, and tactics for achieving competitive advantage.

Course Overview:

Students will explore the strategic creation process through strategy selection, based upon analysis of internal and external factors, through implementation and evaluation of the selected strategy. Through selected readings, students apply concepts and processes to understand the value and risks associated with the strategic planning process. Competition, innovation, ethics, and sustainability, woven throughout the course, provide students with a background context for realizing the challenges that businesses face in selecting and implementing strategic choices.

Course Learning Outcomes:

1. Demonstrate an understanding of the processes and techniques of marketing data collection, analysis, and visualization.
2. Explain the terminology and tools of marketing analytics.
3. Apply the practical tools and techniques of marketing analytics.
4. Understand the roles of data technologies, data management systems and data visualization in marketing.
5. Understand artificial intelligence, machine learning and deep learning.

6. Run field analyses in digital environments, including A/B testing.

PARTICIPATION & ATTENDANCE

Prompt and consistent attendance in your online courses is essential for your success at CSU-Global Campus. Failure to verify your attendance within the first 7 days of this course may result in your withdrawal. If for some reason you would like to drop a course, please contact your advisor.

Online classes have deadlines, assignments, and participation requirements just like on-campus classes. Budget your time carefully and keep an open line of communication with your instructor. If you are having technical problems, problems with your assignments, or other problems that are impeding your progress, let your instructor know as soon as possible.

COURSE MATERIALS

Required:

- Wang, B. (2017). *Creativity and data marketing: a practical guide to data innovation*. London: Kogan Page.

NOTE: All non-textbook required readings and materials necessary to complete assignments, discussions, and/or supplemental or required exercises are provided within the course itself. Please read through each course module carefully.

COURSE SCHEDULE

Due Dates

The Academic Week at CSU-Global begins on Monday and ends the following Sunday.

- **Discussion Boards:** The original post must be completed by Thursday at 11:59 p.m. MT and peer responses posted by Sunday at 11:59 p.m. MT. Late posts may not be awarded points.
- **Critical Thinking:** Assignments are due Sunday at 11:59 p.m. MT.

WEEKLY READING AND ASSIGNMENT DETAILS

Module 1

Readings

- Chapter 1 in *Creativity and data marketing: A practical guide to data innovation*
- Ransbotham, S., & Kiron, D. (2017). Analytics as a source of business innovation. *MIT Sloan Management Review*, (58380), 1–21.
- Wedel, M., & Kannan, P. K. (2016). Marketing analytics for data-rich environments. *Journal of Marketing*, 80(6), 97–121.

- Petrescu, M. & Krishen, A.S. (2019). Software and data in analytics: Lending theory to practice. *Journal of Marketing Analytics*, 7(3), 125-126.

Discussion (25 points)

Module 2

Readings

- Chapter 2 in *Creativity and data marketing: A practical guide to data innovation*
- Van Auken, S. (2015). From consumer panels to big data: An overview on marketing data development. *Journal of Marketing Analytics*, 3(1), 38–45.
- Khan, Z., & Vorley, T. (2017). Big data text analytics: an enabler of knowledge management. *Journal of Knowledge Management*, 21(1), 18–34.

Discussion (25 points)

Critical Thinking (110 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Big Data in Retailing

Use your favorite retailer and research what useful big data information the company can find online, in social media, consumer reviews, and online shopping.

Please create an example of a relational or non-relational database and explain how the company can manage and use this information and big data when developing its marketing strategy and what type of ethical difficulties it might face.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Big Data in Global Marketing

Please present an overview regarding the advantages and disadvantages using big data for marketing decision making. What are some of the ethical difficulties that marketers are facing and how can they deal with them in the digital global economy that extends beyond country borders and regulations?

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Module 3

Readings

- Chapter 3 in *Creativity and data marketing: A practical guide to data innovation*
- Mela, C. F., & Moorman, C. (2018, May 30). Why marketing analytics hasn't lived up to its promise. *Harvard Business Review*.
- Quinn, L., Dibb, S., Simkin, L., Canhoto, A., & Analogbei, M. (2016). Troubled waters: The transformation of marketing in a digital world. *European Journal of Marketing*, 50(12), 2103–2133. Retrieved from <https://bura.brunel.ac.uk/bitstream/2438/14247/1/FullText.pdf>

Discussion (25 points)

Critical Thinking (110 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Web Qualitative Data Management

In step one of this assignment, please analyze the website of your favorite company, the company where you work, or your own business. Focus on the key topics of the site, keywords, target market, and the most important messages it sends.

In the second step, please use this web scraping tool <https://www.parsehub.com/> to download information from the website of your favorite company—or you can manually download the main pages of the website.

In the third step, please analyze this download file in the lexical analysis software LIWC to uncover the main lexical information about the website: <http://liwc.wpengine.com/>. To use the free version of the tool on this page, scroll to the bottom of the page and use the box to the right of the heading “Give it a try”.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Data Management in R

For this assignment, go through the functions in the Quanteda package. Use the data corpus built into Quanteda, which is a corpus of every presidential inaugural address. This corpus will be used to create word clouds, comparison clouds, lexical dispersion plots, keyness, and frequency plots. Follow these steps:

1. Open R Studio
2. Open the file: Quanteda Examples.R
3. Run each line of code to see an example of Quanteda’s text analysis and visualizations.

Present your findings in the assignment paper and describe how you could use this software in a business setting.

Installing RStudio

RStudio is a more user-friendly way to implement the R language than the standard R program we install first. It is possible to program in R without RStudio, but it is not possible to use RStudio without R. RStudio makes developing in R easier and is used by most professionals who program in R.

If R is already installed, be sure that you have the latest version. Here is a step-by-step guide for checking that the latest version of R is installed.

Note: The R program is not to be confused with the R language. The R program is a programming tool that allows programming using the R language. RStudio is a second programming tool that was built because the R program is difficult to use.

Install the R Program:

1. The software can be downloaded from the Comprehensive R Archive Network, referred to as CRAN, which is a non-profit network. Check this site for computer requirements.

2. Click the download R link.
4. Select a “mirror” that is geographically close.
5. Click the right link to download R for Windows or Mac.
6. Click the latest Download R link at the top of the page (the course textbook requires version 3.4.2 or higher).
7. After the software has downloaded, install the software (see the links to the installation instructions).
8. There is no need to open R once it has been installed.

Install RStudio:

1. The software can be downloaded from RStudio, which is a private firm that offers basic versions of RStudio for free.
2. Click the green download button under the "RStudio Desktop Open Source License" column where it says "FREE."
3. From the Installers list, click the link that best reflects the computer's operating system (the course textbook requires version 1.1.383 or higher).
4. After the software has downloaded, install the software.
5. You may see an option to install GIT. You do not need the GIT installation for this course; however, choosing to install it will not negatively affect your classroom experience. GIT increases collaboration capabilities.
6. Open RStudio.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Module 4

Readings

- Chapter 4 in *Creativity and data marketing: A practical guide to data innovation*
- Palazzo, M., Vollero, A., & Siano, A. (2016). Identifying new segments from a global branding perspective: A three-country study. *Journal of Marketing Analytics*, 4(4), 159–171.

Discussion (25 points)

Portfolio Milestone (25 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Your Personal Website

For this Portfolio Project, you will synthesize and apply the concepts, methods, and tools studied in this course.

The primary focus of this Portfolio Project is to convey that you understand the marketing analytics process and that you can identify specific examples or actions of strategic planning activities, as specifically related to your selected company.

For this first milestone, please select your personal website, that of your company, or your employer (or your professional social media profiles and blogs as a worst-case scenario). Please also identify all the social media profiles that belong to this organization.

Your paper should be 1-2 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least four scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Major Global Company

The primary focus of this Portfolio Project is to convey that you understand the marketing analytics process and that you can identify specific examples or actions of strategic planning activities, as specifically related to your selected company.

For this first milestone, please select a major global company that interests you and find its international, English-language website. Please also identify all the social media profiles that belong to this organization.

Your paper should be 1-2 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least four scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Module 5

Readings

- Chapter 5 in *Creativity and data marketing: A practical guide to data innovation*
- Geuens, M., & De Pelsmacker, P. (2017). Planning and conducting experimental advertising research and questionnaire design. *Journal of Advertising, 46*(1), 83-100.
- Turner, B., & Hasford, J. (2016). Planned to miss: The use of two-method measurement design in experimental marketing research. *Advances in Consumer Research, 44*, 655-658. Retrieved from http://www.acrwebsite.org/volumes/v44/acr_vol44_1022181.pdf

Discussion (25 points)

Critical Thinking (110 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Using Large Data Sets for Marketing Decision Making

In the Winter Attribution Case Study, a unique data set was collected in collaboration with a large online media analytics and optimization platform company. The online media company manages the entire campaign of a U.S.-based retailer.

It includes an individual-level data set consisting of advertising exposures and user-initiated actions, with users tracked across different advertising channels and media:

- Paid keyword advertising campaigns across multiple popular search engines
- Display advertising campaigns across various websites employing multiple targeting techniques (e.g., retargeting, prospecting targeting, and affiliate advertising).

After reading the case study and taking a look at the data file, compare a first click versus last click attribution model; then, decide whether new customers spend more or less than old customers and recommend an action plan to the company. Feel free to use any software you deem helpful, such as SPSS or R.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Using A/B Testing for Marketing Decision Making

In the Winter Attribution Case Study, a unique data set was collected in collaboration with a large online media analytics and optimization platform company. The online media company manages the entire campaign of a U.S.-based retailer.

It includes an individual-level data set consisting of advertising exposures and user-initiated actions, with users tracked across different advertising channels and media:

- Paid keyword advertising campaigns across multiple popular search engines
- Display advertising campaigns across various websites employing multiple targeting techniques (e.g., retargeting, prospecting targeting, and affiliate advertising).

After reading the case study and taking a look at the data file, assess which type of information is available in the data file and include which other variable would be needed for a more informed decision regarding the company's strategy. Formulate an A/B test that the company could use to complement the data set.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Module 6

Readings

- Chapters 6 and 7 in *Creativity and data marketing: a practical guide to data innovation*
- Makridakis, S., Spiliotis, E., & Assimakopoulos, V. (2018). Statistical and machine learning forecasting methods: Concerns and ways forward. *Plos ONE*, 13(3), 1-26.
- Liao, S., Hsiao, P., Li, C., & Lin, Y. (2015). Mining marketing knowledge to explore social network sites and online purchase behaviors. *Applied Artificial Intelligence*, 29(7), 697-732.

Discussion (25 points)

Critical Thinking (120 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Visualizing Data

Read the Cloverleaf Stores Case Study and check the data file.

At the end of the case study, Diya mentions that it is necessary to take a look at the data. "With multiple factors, we'll want to start with regressions, and we'll have to consider how to control for factors we can't observe—in case there's something affecting this that we don't yet know about."

Under these circumstances, get familiar with the data file and determine which variables are most important for you. The most important variable for us seems to be the click through rate. Next, run a correlation to see the relationship of other variables to the click-through rate and establish a model that can be of interest to the management team. You can use either SPSS or R.

Also, create a visual graphic to present the key information in the data file to the management team.

Present your findings and your recommendations to the Cloverleaf team.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Correlation and Data Visualization

In working on your blog that you started for Discussion in Week 4, by now you should already have a few weeks of analytics regarding its usage, either from Google Analytics or from another software attached to it, which can show you the level of traffic, the profiles of visitors, and their countries of origin.

Download the analytics file and once again check the variables available to you.

Under these circumstances, get familiar with the data file and see which variables are most important for you.

Next, run a correlation to see the relationship of other variables to the bottom line variable that you selected as most important, such as click-through rate, and establish a model that you think could be of interest to the management team. You can use either SPSS or R.

Also, create a visual graphic to present the key information in the data file to the management team.

Present your findings and recommendations regarding further actions that you can take to improve traffic and readership on your blog or website.

Your paper should be 4-6 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Portfolio Milestone (25 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Marketing Analytics Process—Your Website

For this Portfolio Project, you will synthesize and apply the concepts, methods, and tools studied in this course.

The primary focus of this Portfolio Project is to convey that you understand the marketing analytics process and that you can identify specific examples or actions of strategic planning activities, as specifically related to your selected company.

Therefore, please select your personal website, that of your company, or your employer (or your professional social media profiles and blogs as a worst-case scenario). Please also identify all the social media profiles that belong to this organization.

After identifying all potential sources of information, it is time to download data analytics about the online presence of the organization.

For this milestone, please use the following tools (and others) to download digital information about the website and social media profiles:

- Parsehub—Web scraping tool
- Hootsuite
- Facebook Analytics
- Instagram Analytics
- Tweet Reach.

Please discuss in the milestone assignment the data you downloaded and how you plan to analyze it.

Your paper should be 1-2 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least four scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Marketing Analytics Process—Global Company

The primary focus of this Portfolio Project is to convey that you understand the marketing analytics process and that you can identify specific examples or actions of strategic planning activities, as specifically related to your selected company.

Therefore, please select a major global company that interests you and find its international, English-language website. Please also identify all the social media profiles that belong to this organization. After identifying all potential sources of information, it is time to download data analytics about the online presence of the organization.

Please use the following tools (and others) to download digital information about the brand, website and social media profiles:

- Parsehub—Web scraping tool
- Hootsuite
- Facebook Analytics
- Instagram Analytics
- Tweet Reach.

Please discuss in the milestone assignment the data you downloaded and how you plan to analyze it.

Your paper should be 1-2 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least four scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Module 7

Readings

- Chapters 8 and 9 in *Creativity and data marketing: A practical guide to data innovation*
- Miles, D. A. (2014). Measuring customer behavior and profitability: Using marketing analytics to examine customer and marketing behavioral patterns in business ventures. *Academy of Marketing Studies Journal*, 18(1), 141-166.
- Saura, J. R., Palos-Sánchez, P., & Cerdá Suárez, L. M. (2017). Understanding the digital marketing environment with KPIs and web analytics. *Future Internet*, 9(4), 76. Retrieved from <https://www.mdpi.com/1999-5903/9/4/76/htm>

Discussion (25 points)

Module 8

Readings

- Chapter 10 in *Creativity and data marketing: A practical guide to data innovation*
- Milne, G. R., Pettinico, G., Hajjat, F. M., & Markos, E. (2017). Information sensitivity typology: Mapping the degree and type of risk consumers perceive in personal data sharing. *Journal of Consumer Affairs*, 51(1), 133–161.
- Petrescu, M., & Krishen, A. S. (2018). Analyzing the analytics: Data privacy concerns. *Journal of Marketing Analytics*, 6, 41-43.
- Walker, K. L. (2016). Surrendering information through the looking glass: Transparency, trust, and protection. *Journal of Public Policy & Marketing*, 35(1), 144–158.

Discussion (25 points)

Portfolio Project (300 points)

Choose one of the following two assignments to complete this week. Do not do both assignments. Identify your assignment choice in the title of your submission.

Option #1: Digital Marketing Analytics and Decision Making

The primary focus of this Portfolio Project is to convey that you understand the marketing analytics process and that you can identify specific examples or actions of strategic planning activities, as specifically related to your selected company.

Therefore, please select a major global company that interests you and find its international, English-language website. Please also identify all the social media profiles that belong to this organization. After identifying all potential sources of information, it is time to download data analytics about the online presence of the organization.

Please use the following tools (and others) to download digital information about the brand, website and social media profiles:

- Parsehub—Web scraping tool
- Hootsuite
- Facebook Analytics
- Instagram Analytics
- Tweet Reach.

After downloading all possible data, please check each data file and decide how you will use it and analyze it. For example, you can perform a content analysis or create a word cloud from the website text data, and you can include a figure from Google Trends regarding Google searches in different countries in the paper and interpret it—while the data from Facebook or Instagram can be used in a correlation, ANOVA, or regression analysis.

Another great tool to analyze your data is represented by IBM Watson Analytics, discussed in the course materials and offering a free trial.

Please present in the paper information on all these steps followed and on your findings from the data analysis. Include one figure, infographic, or table in the form of a dashboard that summarizes the key findings of your analysis.

Based on these findings, formulate recommendations on how this business can improve its marketing strategy in the future.

Paper structure:

1. Executive Summary (max. 1 page)
2. Introduction
3. Organization Description (1-2 paragraphs)
4. Presentation of Data Sources (1-2 paragraphs)
5. Overview of Data (1-2 pages)
6. Data Analysis and Results (1-2 pages)
7. Findings (1-2 pages)
8. Recommendations and Conclusions (1-2 pages)
9. References
10. Appendix (please include here major tables and information that would be too much in the text).

Your paper should be 6-10 pages in length and conform to the CSU-Global Guide to Writing & APA. Include at least five scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these resources.

Option #2: Global Marketing Analytics and Decision-Making

The primary focus of this Portfolio Project is to convey that you understand the marketing analytics process and that you can identify specific examples or actions of strategic planning activities, as specifically related to your selected company.

Therefore, please select a major global company that interests you and find its international, English language website. Please, also identify all the social media profiles that belong to this organization.

After identifying all potential sources of information, it is time to download data analytics about the online presence of the organization.

Please feel free to use any tools learned in class, including the following (and others) to download digital information about the website and social media profiles and to analyze it:

- Parsehub—Web scraping tool
- Google Trends
- Facebook Analytics
- Instagram Analytics
- Tweet Reach.

After downloading all possible data, please check each data file and decide how you will use it and analyze it. For example, you can perform a content analysis or create a word cloud from the website text data and you can include a figure from Google Trends regarding Google searches in different countries in the paper and interpret it—as well as use the numeric data in a correlation or ANOVA analysis.

Please present in the paper information all the steps you followed and on your findings from the data analysis.

Include one figure, infographic, or table in the form of a dashboard that summarizes the key findings of your analysis. Based on these findings, formulate recommendations on how this business can improve its marketing strategy in the future.

Paper structure:

1. Executive Summary (max. 1 page)
2. Introduction
3. Organization Description (1-2 paragraphs)
4. Presentation of Data Sources (1-2 paragraphs)
5. Overview of Data (1-2 pages)
6. Data Analysis and Results (1-2 pages)
7. Findings (1-2 pages)
8. Recommendations and Conclusions (1-2 pages)
9. References
10. Appendix (please include here major tables and information that would be too much in the text).

Your paper should be 6-10 pages in length and conform to the CSU-Global Guide to Writing and APA. Include at least two scholarly references in addition to the course textbook. The CSU-Global Library is a good place to find these references.

COURSE POLICIES

Grading Scale	
A	95.0 – 100
A-	90.0 – 94.9
B+	86.7 – 89.9
B	83.3 – 86.6
B-	80.0 – 83.2
C+	75.0 – 79.9
C	70.0 – 74.9
D	60.0 – 69.9
F	59.9 or below

Course Grading

20% Discussion Participation
45% Critical Thinking Assignments
35% Final Portfolio Project
0% Live Classroom

IN-CLASSROOM POLICIES

For information on late work and incomplete grade policies, please refer to our [In-Classroom Student Policies and Guidelines](#) or the Academic Catalog for comprehensive documentation of CSU-Global institutional policies.

Academic Integrity

Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Academic dishonesty includes cheating, fabrication, facilitating academic dishonesty, plagiarism, reusing /repurposing your own work (see CSU-Global Guide to Writing & APA for percentage of repurposed work that can be used in an assignment), unauthorized possession of academic materials, and unauthorized collaboration. The CSU-Global Library provides information on how students can avoid plagiarism by understanding what it is and how to use the Library and internet resources.

Citing Sources with APA Style

All students are expected to follow the CSU-Global Guide to Writing & APA when citing in APA (based on the most recent APA style manual) for all assignments. A link to this guide should also be provided within most assignment descriptions in your course.

Disability Services Statement

CSU-Global is committed to providing reasonable accommodations for all persons with disabilities. Any student with a documented disability requesting academic accommodations should contact the Disability Resource Coordinator at 720-279-0650 and/or email ada@CSUGlobal.edu for additional information to coordinate reasonable accommodations for students with documented disabilities.

Netiquette

Respect the diversity of opinions among the instructor and classmates and engage with them in a courteous, respectful, and professional manner. All posts and classroom communication must be conducted in accordance with the student code of conduct. Think before you push the Send button. Did you say just what you meant? How will the person on the other end read the words?

Maintain an environment free of harassment, stalking, threats, abuse, insults, or humiliation toward the instructor and classmates. This includes, but is not limited to, demeaning written or oral comments of an ethnic, religious, age, disability, sexist (or sexual orientation), or racist nature; and the unwanted sexual advances or intimidations by email, or on discussion boards and other postings within or connected to the online classroom. If you have concerns about something that has been said, please let your instructor know.