Sungkyunkwan University (SKKU) International Summer Semester (ISS) 2025

Business Analytics

Prof. Kacy Kim, Bryant University
Email: kkim2@bryant.edu

COURSE DESCRIPTION

This course is a beginner-friendly guide to business analytics, designed to open your eyes to the importance of data in the business world. You will learn how technology can help make better business decisions using data. The course explores simple tools to better understand business, such as identifying which groups of customers to focus on (segmentation), how to reach them (targeting), where to position your business in the market, and how to keep customers happy and loyal. You will also learn how to analyze customer behavior and make smart decisions about products and pricing. Through easy-to-understand examples and real-life business situations, you will grasp the basic ideas and methods of business analytics, providing a solid foundation in how to use data in business.

NOTE: **This course is designed for beginners**, requiring no prior knowledge or experience in analytics to join and benefit. It welcomes all students who are eager to learn and explore the world of analytics from the ground up!

READING COURSE MATERIALS

Students are required to register on the HBR website provided below and purchase the course pack

Harvard Business Review: https://hbsp.harvard.edu/import/1186093

REQUIRED SOFTWARE: (free license for students)

R: R is a free software environment for statistical computing and graphics, and is widely used by both academia and industry: https://www.r-project.org/index.html

RStudio is a user friendly environment for R that has become popular. Each student should download these two programs: Please note: even if you already have them, please check for updates. https://www.rstudio.com/products/RStudio/#Desk

Tableau is a commercial database visualization tool that supports many different ways to interact with the data. Tableau has given students free academic licenses so that you can install the software on your own computer: https://www.tableau.com/academic/students

COURSE REQUIREMENTS AND GRADING

Students are responsible for all reading assignments, handouts, and lecture materials. Students who miss class are expected to make arrangements with fellow students for lecture material. SKKU regulations require students to attend at least 80% of all classes.

Grading		Scale		
Participation	10%	90-100%	A	PASS
Individual Assignment	40%	87-89%	B+	PASS
▪ Interactive Resume	(15%)	84-86%	B	PASS
▪ Dashboard Assignments	(25%)	80-83%	B-	PASS
Group Case Analysis	50%	77-79%	C+	PASS
▪ Group Work 1: Mobile Games	(20%)	74-76%	C	PASS
▪ Group Work 2: Final project	(30%)	70-73%	C-	PASS
		67-69%	D+	PASS
		60-66%	D	PASS
		59% or lower	F	FAIL

INDIVIDUAL ASSIGNMENTS (40%)

There will be multiple assignments throughout the semester. These assignments include all individual analytical exercises. You will be asked to solve specific business analytics problems relevant to corresponding lectures by using some statistical software tools (such as R or Tableau).

- Visualizing Data (Interactive Resume using Tableau): The objective of the assignment is to empower you with the skills to design and develop an interactive resume using Tableau. In today's data-driven marketplace, being able to visualize and interact with information is a key skill. An interactive resume is not just a document, but a dynamic, data-enabled platform that allows both you and prospective employers to engage with your professional background in a unique, non-linear way. By leveraging Tableau's robust visualization and interactivity features, this assignment will guide you in transforming your traditional resume into an interactive dashboard. This dashboard will serve as an innovative platform to showcase your marketing analytics skills, work experience, and portfolio, setting you apart in the competitive job market.
- The interactive resume assignment consists of two phases. **Phase I** is an ungraded assignment designed to help you familiarize yourself with Tableau. You will receive feedback on your Phase I submission, which you should use to refine and improve your work for **Phase II**. Your final submission should reflect this feedback to create a compelling and polished interactive resume.
- Dashboard Assignments

GROUP CASE ANALYSIS (20%)

We will analyze three cases over the semester. Groups will be randomly assigned to each case and will give a 15-minute presentation of their case analysis to the rest of the class. The rest of the groups will be responsible for preparing and facilitating a discussion that will deepen our understanding and uncover insights from the case study work. In preparation, group members should meet to process and analyze the reading, quantitatively work on the data, draw our key ideas and central questions, develop the discussion structure and topics, and collaboratively plan for a productive, engaging discussion of the work.

Importantly note that all groups have to analyze each case and, following the presentation, there will be an open discussion of the case by the entire class. I will post a short list of questions (3-5) to guide the case study readings and your analysis. All class members should review these questions to support full engagement in the presenting group's learning activities and discussion.

GROUP'S INDEPENDENT PROJECT (30%)

Groups will be randomly assigned to each case and will give a 15-minute presentation of their case analysis to the rest of the class. The rest of the groups will be responsible for preparing and facilitating a discussion that will deepen our understanding and uncover insights from the case study work. In preparation, group members should meet to process and analyze the reading, quantitatively work on the data, draw our key ideas and central questions, develop the discussion structure and topics, and collaboratively plan for a productive, engaging discussion of the work.

Student groups (consisting of 4-5 members each) will create and execute a digital marketing campaign using a digital platform of their choice, such as a website, blog, Instagram, Facebook, or YouTube account, to conduct an A/B test. Each group will choose a brand and develop a social media page or advertising campaign on their selected platform. The goal is to test different strategies to see which performs better in driving engagement and conversions.

<u>Project Components:</u>

- Platform Selection and Campaign Development: Each group will select a brand and develop content for the digital platform (e.g., website, blog, social media page). You will use search engine marketing (SEM) techniques to promote the brand or products on your platform.
- A/B Testing: Implement an A/B test to compare two different versions of a page, post, or advertisement. The aim is to determine which version generates more traffic, engagement, or conversions.
- Data Collection and Analysis: Throughout the semester, you will collect data on your platform's performance using web analytics tools like Google Analytics. Key metrics to analyze include traffic sources, user engagement, and conversion rates. Consider questions such as: Where is your traffic coming from? Why are users engaging with your content? How can you improve site reach and engagement? What is your conversion rate?
- Dashboard Development: Using the data collected, each group will create a comprehensive data dashboard to visualize and report their findings. The dashboard should include key performance indicators (KPIs) and metrics that effectively demonstrate the outcomes of your A/B testing and overall campaign performance.

Final Report and Presentation: At the end of the semester, each group will present their dashboard and a detailed report on their campaign's results. The report should include insights from the A/B test, analysis of the data, and recommendations for improving digital marketing strategies based on your findings.

Peer Evaluations

Team members will be evaluated using the peer evaluation form. Peer evaluations impact each individual's project grade. Each individual in the team is evaluated by all others using the attached, confidential form. The individual's average percentage contribution is the percent score that the individual will receive for the project. For example, if the individual receives an 80%, 85%, and 90% from his/her team members his/her average percentage score is 85%. Thus, if the project grade was 90 out of 100 points, that individual would receive a 76.5 (90 points * 85%) for the project.

PLEASE NOTE: THERE IS NO REASON FOR ONE OR TWO INDIVIDUALS TO CARRY A TEAM. THE TEAM IS EXPECTED TO BE A TEAM.

CLASS PARTICIPATION (10%)

The criteria to be considered in calculating the participation mark are:

- quality of contribution (e.g., relevance, contribution to understanding, critical analysis, clarity of contribution, originality, comparative insight, consistency of valuable contribution, facilitation of further discussion, evidence of learning in the subject)
- contribution to group climate (e.g., not domineering/brevity, courtesy and tack)
- attitude to learning (e.g., interest, attentiveness in class)

COURSE SCHEDULE

* This schedule may be revised if needed. Changes to the schedule will be announced in class.

WEEK I		**TOPICS**	**ASSIGNMENTS**
	6/30 Mon	Overview of Business Analytics	
	7/01 Tue	Describing Data	
	7/02 Wed	Intro R and Tableau	
	7/03 Thu	Visual Analytics to Develop Dashboard	
WEEK II: Forecasting			
	7/07 Mon	Model Building, Analysis, and Interpretation	
	7/08 Tue	Interactive Resume (Phase I)	Interactive Resume (Phase I)
	7/09 Wed	Visual Analytics: Dashboard	
	7/10 Thu	Regression Analysis	
WEEK III: Forecasting + Sentiment Analysis			
	7/14 Mon	Analytics & Technology	
	7/15 Tue	Google Analytics & A/B Testing	
	7/16 Wed	A/B Testing Practice	
	7/17 Thu	Dashboard Practice	
WEEK IV			
	7/21 Mon	Group Project Work Session I	Interactive Resume (Phase II)
	7/22 Tue	Group Project Work Session II	
	7/23 Wed	Group Project Presentation	