

Syllabus

MGT 153: Business Analytics

Summer 2022

Instructors

The professor for this course is Dan Yavorsky. Dan holds an MBA and PhD from UCLA Anderson and has over 10 years of experience applying data analytic and econometric techniques at consulting firms, including Bain & Company. He is currently a Senior Vice President and the Head of Analytics and Marketing Science at GBK Collective, a marketing strategy and consumer insights firm. Dan will actively monitor Piazza, is available over email, and will hold a weekly office hour via Zoom.

Dan Yavorsky

- piazza: link
- email: dyavorsky@ucsd.edu
- bio: GBK | linkedin
- hours: Monday 8:30–9:30pm PT via Zoom (link, Meeting ID 981 3440 6917, Passcode 667788)

The TA for this course is Mohammed Akram Akbar. Akram is currently pursuing his Masters in Business Analytics from UCSD Rady, and has 8 years work experience in the technology industry. Akram will actively monitor Piazza, can be reached via email, and will be the primary grader for this course.

Mohammed Akram Akbar

- email: makbar@ucsd.edu
- bio: linkedin

Logistics

Schedule

We meet Wednesday and Fridays from 11:00am – 1:50pm over Zoom.

The Zoom link is here (Meeting ID 943 5305 3990, Passcode 334455)

All lectures will be recorded and posted on Canvas (assuming no technical difficulties).

Website and Materials

All materials for this course are on (or linked from) Canvas. Materials may include slides, links to relevant readings or videos, or demo files. This course relies solely on freely-available books, articles, blogs, videos, and visualizations. In addition, all software utilized will be available through UCSD student subscriptions at no out-of-pocket cost to the student.

Piazza

We will use Piazza as the primary method of Q&A: link

Course Introduction

Business Analytics is the process of turning data into meaningful insights. That data might be information on customer preferences, employee turnover, performance of physical assets, or product sales. These data are combined with exploratory techniques, visualizations, economic theory, and/or statistical modeling in pursuit of optimal managerial policies.

Our primary goal is to introduce students to data-driven business decision-making. We also aim to enable students to execute analytic techniques by developing proficiency with popular software tools sought by employers.

In pursuit of those goals, our course design principles are *experiential* learning and assessment of applications. Our time will be spent discussing key concepts in business analytics *as we execute them* in software. Our mentors instilled in us the idea that “you don’t understand it until you’ve created it (or coded it) yourself,” and we, in turn, aim to propagate this belief with the next generation of scholars.

Implementation will be done via Excel, SQL, Tableau, and R.

- Microsoft Excel is a prerequisite for interacting with virtually all non-technical business stakeholders and proficiency with Excel is expected from virtually all employers.
- SQL may (or may not) stand for “structured query language” and is the standard language for accessing and manipulating (sometimes very large) databases.
- Tableau is a visual analytics platform that can create powerful charts and dashboards.
- R is an open-source integrated suite of software facilities for data manipulation, calculation, and visualization – or in short, a “programming language.”

With sufficient student interest and time permitting, we may also discuss the Linux Command Line, the VIM text editor and key-bindings, Markdown, Pandoc, LaTeX, and/or RMarkdown documents. This course will not cover Python, as the professor is well-versed in R but not Python.

Each week we will include a lecture and software demonstration. Each week’s homework will have two parts. The first will follow closely from the lecture and software demonstration. The second will require students to explore and learn additional techniques about the software not covered in class. A take-home final assignment will be offered at the end of the course.

We seek to simulate a professional experience and therefore require no memorization, encourage collaboration, and allow students the option to attend lectures live or view recordings at their leisure.

Most students will need to commit approximately 5–10 hours per week outside of class to have a successful experience. We may need to modify our terms and expectations as we proceed. Student feedback may be required to make appropriate adjustments.

Topics

We address the following topics week-by-week. Please see the associated Canvas page for each week/topic to find related materials and more information.

1. Introduction to Course & Excel
2. Relational Databases & SQL
3. Data Visualization & Tableau
4. Data Manipulation & R
5. TBD
6. Take-home Final Assignment

Assignments and Grading

Your grade is composed of 2 types of evaluations:

- homework and quizzes (72%)
- final assignment (28%)

Homeworks and Quizzes: Each week except the last, we will provide a two-part homework assignment. Part 1 will ask you to apply the concepts covered in the lecture. Part 2 will ask you to explore an additional aspect of the software. The suggested readings or your own research may be necessary to discover how to accomplish part 2. Depending on the topic and software utilized, you will submit your answers via a Canvas quiz or via a document upload on Canvas; exactly how to submit will be made explicit on Canvas.

Final Assignment: There will be a take-home final assignment. It will draw heavily from the assigned homeworks and may assess comprehension of the readings and/or require understanding of the material presented in the lectures.

Curve and Bonus: The median grade will be curved to a B+. A collective bonus will be applied if more than 80% of CAPE evaluations are completed.

Course Policies

Attendance: We strongly recommend regular attendance and participation, but we will not formally assess them. It is imperative to keep pace with the course and not fall behind. You should proactively anticipate and manage issues you might experience in balancing your efforts across courses.

Late Enrollment: Students who add the course after lecture 1 are individually responsible for immediately catching up on all class content and deliverables.

Collaboration: All assignments (but not the final “exam”) may be worked on in collaboration with other students. Collaboration is optional and groups should be small. Each student is individually responsible for submitting their own assignment.

Contacting Instructors: Please use Piazza as the primary method to ask questions about course content and homeworks. For matters that pertain to you individually (illness, questions about grading, etc.) please email the instructor and cc the TA (or vice-versa); do not email us separately.

Class Participation: Some letter grades may be adjusted based on class contributions. An example of a positive contribution would be helping to consistently move the class discussion forward. Examples of negative contributions include distracting others and nonconformance to classroom norms.

Late Submissions: Late deliverables will only be accepted in grave circumstances with documentation, such as serious illness or death in the family, with some form of notification required prior to the deliverable due date.

Re-grade Requests: Any request for regrading must be made in writing within two weeks of a deliverable being assessed but before final course grades are submitted to the UCSD Registrar. The professor and/or TA will entirely regrade any such deliverable, meaning that the resulting grade change may be positive or negative, depending on the specifics of the situation.

Important UCSD Topics

Academic Integrity

Academic Integrity is expected of everyone at UC San Diego. This means that you must be honest, fair, responsible, respectful, and trustworthy in all of your actions. Lying, cheating, or any other forms of dishonesty will not be tolerated because they undermine learning and the University's ability to certify students' knowledge and abilities. Thus, any attempt to get, or help another get, a grade by cheating, lying, or dishonesty will be reported to the Academic Integrity Office and will result in sanctions. Sanctions can include an F in this class and suspension or dismissal from the University.

Integrity of scholarship is essential for an academic community. As members of the Rady School, we pledge ourselves to uphold the highest ethical standards. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind.

You can learn more about academic integrity at:
<https://academicintegrity.ucsd.edu/>

The complete UCSD Policy on Integrity of Scholarship can be viewed at:
<http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2>

All aspects of the UCSD honor code apply in this course. If you are ever unsure how they apply, please ask your classmates, TA, or professor for clarification. It is much better to be conservative about honor code violations than to take a risk. You can be suspended or expelled for cheating.

Students with Disabilities

A student who has a disability or special needs and requires an accommodation in order to have equal access to the classroom must register with the Office for Students with Disabilities (OSD). The OSD will determine what accommodations may be made and provide the necessary documentation to present to the instructor and OSD liaison.

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter (paper or electronic) issued by the OSD. Students are required to discuss accommodation arrangements with instructors and OSD liaisons in the department 72 business hours in advance of any exams or assignments. No accommodations can be implemented retroactively.

Please visit the OSD website <https://osd.ucsd.edu/portal/tutorial.html> for further information or contact the Office for Students with Disabilities by phone at 858-534-4382 or via email at osd@ucsd.edu.

NonDiscrimination Policy Statement

The University of California, in accordance with applicable Federal and State law and University policy, does not discriminate on the basis of race, color, national origin, religion, sex, gender identity, pregnancy, physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services. The University also prohibits sexual harassment. This nondiscrimination policy covers admission, access, and treatment in University programs and activities.

Title IX

The Office for the Prevention of Harassment & Discrimination (OPHD) provides assistance to students, faculty, and staff regarding reports of bias, harassment, and discrimination. OPHD is the UC San Diego Title IX office. Title IX of the Education Amendments of 1972 is the federal law that prohibits sex discrimination in educational institutions that are recipients of federal funds. Rady students have the right to an educational environment that is free from harassment and discrimination.

You can make a complaint of harassment or discrimination – or simply make an appointment to find out more information – by contacting OPHD:

- by phone at 858-534-8298
- by email at ophd@ucsd.edu
- or online at the Overview for Students webpage

Students may feel more comfortable discussing their particular concern with a trusted employee. This may be a Rady student affairs staff member, a department Chair, a faculty member, or other University official. These individuals have an obligation to report incidents of sexual violence and sexual harassment to OPHD. This does not necessarily mean that a formal complaint will be filed.

If you find yourself in an uncomfortable situation, ask for help. The Rady School of Management is committed to upholding University policies regarding nondiscrimination, sexual violence, and sexual harassment.

Health and Well-Being

Throughout your time at UC San Diego, you may experience a range of issues that can negatively impact your learning. These may include physical illness, housing or food insecurity, strained relationships, loss of motivation, depression, anxiety, high levels of stress, alcohol and drug problems, feeling down, interpersonal or sexual violence, or grief.

These concerns or stressful events may lead to diminished academic performance and affect your ability to participate in day-to-day activities. If there are issues related to coursework that are a source of particular stress or challenge, please speak with your professors so that we are able to support you. In addition, UC San Diego provides a number of resources to all enrolled students, including:

- Counseling and Psychological Services: 858-534-3755 or caps.ucsd.edu
- Student Health Services: 858-534-3300 or studenthealth.ucsd.edu
- CARE at the Sexual Assault Resource Center: 858-534-5793 or care.ucsd.edu
- The Hub Basic Needs Center: 858-246-2632 or basicneeds.ucsd.edu