

# MGV-438V Essentials of Quantitative Analysis & Business Storytelling

## University of California, Davis Graduate School of Management

### OPENING

This online course is for students who are either interested in getting their MBA or are currently enrolled in an upcoming MBA program. The UC Davis MBA program is a rigorous series of courses that require students to have qualitative and quantitatively analytical skills.

This class is designed to help current/future students prepare for the challenge of an MBA program by providing you with foundational quantitative skills to let you hit the ground running. The course is often taught by a combination of business practitioners and business school professors providing a powerful combination of real world application and theory.

The scope of this course covers: basic quantitative skills, introductory Excel skills and techniques, introductory business language and concepts, business communication techniques.

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### COURSE LEARNING OBJECTIVES

This eLearning course will be taught from a “real world perspective” to teach students to become comfortable with collecting, using and understanding data to gain insights into current day business challenges.

The primary goal of this class is to allow students to develop a fundamental understanding of quantitative data tools and how to use Excel methods and gain analytical skills.

There are **FIVE primary Student Learning Objectives** for this course:

1. Understand **foundational quantitative competencies necessary for both business school and business leadership positions.**
2. **Learn to apply quantitative skills using Excel basic commands and features.**
3. Ability to **develop simple to complex graphs and charts** to help tell the data “story”.

4. Develop skills to **effectively collect data** and then **clean the data** to be able to **efficiently analysis the data**.
5. Understand the various ways to **manipulate data to gain insights**.
6. Use data to be able to **gain insight into what's happening in the business and then identify appropriate tactics, strategies and behaviors**.

## COURSE TEACHING APPROACH

I will teach this course using three fundamental facilitation techniques;

**First**, I use the Socratic method of using case studies and experiential learning. As opposed to straight lecture on the materials (I will not lecture on the material "cover to cover"), by employing the Socratic method towards instruction this means there is a heavy emphasis that you have read the content prior to class. This will occur during our synchronous sessions.

**Secondly**, I believe one of the best means to facilitate adult learning is through experiential application. This simply means students will have numerous opportunities to immediately apply class concepts and tools. This will occur in homework, midterms, final's and practice sessions.

**Finally**, we will use several real-life business situations (that range from Fortune 50 to Government to Non-Profit) case studies as a lens to drive key analytical themes and applications. These case studies will range from local firms to Global multi-national organizations.

## CURRENT SCHEDULE

Week	Main Theme Topic	Why It Matters	Frameworks   Concepts Learned
<b>"How Do I Do the Basics?"</b>			
1	Foundational Excel Skills	Students will have the foundation in Excel necessary to succeed in both business school and their careers.	<ul style="list-style-type: none"> <li>• Understanding the benefits and power of Excel.</li> <li>• Basic cell commands   functions.</li> <li>• Navigating the ribbon.</li> <li>• VLOOKUP().</li> <li>• Pie charts &amp; histograms.</li> <li>• Mixed   combination charts.</li> <li>• Data validation.</li> <li>• Data manipulation.</li> <li>• Add-ins or plug-ins.</li> </ul>
<b>"I Need to Grasp How Normal or Skewed My Data Is."</b>			
2	Descriptive Statistics	Students will have a basic understanding of statistics in order to dive into more complicated concepts once in the program and to do their own analysis outside in their roles. They will also understand the benefits of understanding the central measures of tendency in data, and why that matters in business process.	<ul style="list-style-type: none"> <li>• Mean, median, mode, range.</li> <li>• Standard deviation.</li> <li>• Variance.</li> </ul>
<b>"I Need to Know How to Display My Data Analysis."</b>			
3	Correlation Coefficient and Charts and Graphs	Students will have a basic understanding of the common graphs and charts used in business and data analysis. They will also understand how produce graphs and charts	<ul style="list-style-type: none"> <li>• Coefficient of correlation.</li> <li>• Basic plots and graphs (including slopes): <ul style="list-style-type: none"> <li>○ Multi-dimensional histograms.</li> <li>○ Box   scatter plots.</li> <li>○ Line graphs.</li> </ul> </li> </ul>

Week	Main Theme Topic	Why It Matters	Frameworks   Concepts Learned
		in Excel and how to read the output to apply it to real-life business scenarios.  <b>Homework #1 Due (24 hours before start of class)</b>	
<b>“Applying My Skills to A Real Life Business Situation.”</b>			
4	Midterm Examination	Apply lessons learned in weeks 1-3 to a real life business example.	<ul style="list-style-type: none"> <li>• CASH case study.</li> </ul>
<b>“I Can Learn How to Apply and Drive Insight in Order to Take Action.”</b>			
5	Introduction to Business Language and Basic Business Math	<p>Students will also gain an understanding of the basic math concepts needed to understand economic, accounting, and finance concepts.</p> <p>Students will also understand basic business terms that are used throughout the program and in business in general</p>	<ul style="list-style-type: none"> <li>• Formula manipulation.</li> <li>• NPV/ROI.</li> <li>• Waterfall.</li> <li>• Business focused terms definitions for common business terms ("dictionary" of terms).</li> <li>• Fun and comedic; games to help drive home lessons (Tic Tac Toe, Buzzword Bingo, etc.).</li> </ul>
<b>“Sourcing Data- As Important as Analyzing It.”</b>			
6	Data Collection   Data Cleaning	Students will understand how to find data sources and how to ensure and increase data quality	<ul style="list-style-type: none"> <li>• Where and how to get data.</li> <li>• Data formatting.</li> <li>• Data scrubbing.</li> <li>• Outliers and missing elements.</li> <li>• Data formatting 101.</li> </ul>
<b>“How Can I Manipulate Data to Find Insights?”</b>			
7	Data Manipulation and Formatting	<p>Students will understand how to structure and modify data to suit needs for data analysis; students will also understand how to format their data for ease of readability.</p> <p>Students will also start to be introduced to the idea of performance measurement.</p> <p><b>Homework #2 Due (24 hours before start of class)</b></p>	<ul style="list-style-type: none"> <li>• Data sorting.</li> <li>• Data transformation.</li> <li>• Data element combination.</li> <li>• Conditional formatting.</li> <li>• Linking data across office suite.</li> <li>• Key performance indicators (KPI) 101.</li> </ul>
<b>“How Do I Use Measurements to Drive the Right Behavior?”</b>			
8	Performance Management, Continued	Students will continue to learn the ideas of performance management, including managerial use of data used to identify problems so that solutions may be derived.	<ul style="list-style-type: none"> <li>• Leading vs. lagging indicators.</li> <li>• Balanced scorecard.</li> </ul>
<b>“How Can I Delivery A Story That an Executive Will Resonate With?”</b>			
9	Executive Mental Models and Storytelling	<p>Students will understand how to interpret their data and use it to convey insights and a message to an Executive audience.</p> <p>Students will also be exposed to the mental model framework in order to apply it to a broad range of executive mindsets. The class will challenge students how think like an executive and subsequently deliver narratives that are tailored to an executive mindset.</p>	<ul style="list-style-type: none"> <li>• Ladder of inference.</li> <li>• Executive narratives with data and story arcs.</li> <li>• Simple, complex, simple storytelling.</li> <li>• Ask first storytelling.</li> <li>• Hero's journey storytelling.</li> </ul>

Week	Main Theme Topic	Why It Matters	Frameworks   Concepts Learned
<b>“Putting It All Together.”</b>			
10	Final Examination	Apply knowledge from all 9 weeks in a combination of multiple-choice questions, quantitative Excel exercises, and essay questions	<ul style="list-style-type: none"> <li>Final exam</li> </ul>

## COURSE REQUIREMENTS AND EXPECTATIONS

### *Attendance and Participation*

This course is structured to help develop your interest and ability to think analytically in today's organizations. You should plan to be actively involved -- this means being attentive, focusing on the video and participating in any assigned activities.

### *Weekly Assignments*

Weekly assignments are an important aspect of applying and learning the concepts of collecting, analyzing and gaining insights from data. Completion of weekly assignments can include case study write ups, a one page “key themes of the week” summary, homework assignments and other lighter effort deliverables.

All assignments should be labeled as follows:

- Student Name & Contact Information, Course Name & Date Submitted.

### *Midterm and Final Examinations*

Both midterm and final examinations will present real life challenges and require an application of specific analytical frameworks to help solve for the appropriate outcome. The midterm format will be a cloud-based examination containing multiple choice and essay. The final exam will be a response to two or three material business challenges in today's landscape (details to follow on both).

## GRADING REQUIREMENTS AND PROCEDURES

Topic	%
<i>Participation Points*</i>	15%
<i>Homework Assignments</i>	5%
<i>Midterm Examination</i>	40%
<i>Final Examination</i>	40%
<b>Total %</b>	<b>100%</b>

## OFFICE HOURS

**Office Hours:** Similar to other in-classroom courses, while we are in the 10-week session, I will be available for consultations and brief “sync sessions” either via email.

## HONOR CODE AND ACADEMIC INTEGRITY

1. It is expected that all class members will treat each other with respect and dignity.
2. It is not acceptable behavior to insult, harass, or demean any member of the class.
3. Professional business behavior should be modeled in the classroom, including the use of appropriate language, jokes, or stories.

## IN GENERAL, STUDENTS SHOULD ADHERE TO THE UC DAVIS PRINCIPLES OF COMMUNITY, COPIED BELOW.

The University of California, Davis, is first and foremost an institution of learning and teaching, committed to serving the needs of society. Our campus community reflects and is a part of a society comprising all races, creeds and social circumstances. The successful conduct of the university's affairs requires that every member of the university community acknowledge and practice the following basic principles:

We affirm the inherent dignity in all of us, and we strive to maintain a climate of justice marked by respect for each other. We acknowledge that our society carries within it historical and deep-rooted misunderstandings and biases, and therefore we will endeavor to foster mutual understanding among the many parts of our whole.

We affirm the right of freedom of expression within our community and affirm our commitment to the highest standards of civility and decency towards all. We recognize the right of every individual to think and speak as dictated by personal belief, to express any idea, and to disagree with or counter another's point of view, limited only by university regulations governing time, place and manner. We promote open expression of our individuality and our diversity within the bounds of courtesy, sensitivity and respect.

We confront and reject all manifestations of discrimination, including those based on race, ethnicity, gender, age, disability, sexual orientation, religious or political beliefs, status within or outside the university, or any of the other differences among people which have been excuses for misunderstanding, dissension or hatred. We recognize and cherish the richness contributed to our lives by our diversity. We take pride in our various achievements, and we celebrate our differences.

We recognize that each of us has an obligation to the community of which we have chosen to be a part. We will strive to build a true community of spirit and purpose based on mutual respect and caring.

# CYRUS JOHN ARAM BIO

*Proven Leader Driving Transformational Business Improvement Programs  
Customer Experience and Business Process Management*

## EDUCATION

**Master of Business Administration**, University of California, Davis  
Graduate School of Management

**Six Sigma Master Black Belt**, American Society for Quality  
Black Belt Certification

**Project Management Professional**, Project Management Institute (PMI)  
Project Management Certification

**Bachelor of Arts**, University of California, Davis  
English, Political Science and Philosophy

## PROFILE

Professor Cyrus Aram brings over 20 years of private and public sector experience in the areas of customer strategy, business transformation, and planning, program, change and quality management. He has domain level expertise in the following business disciplines:

- ❖ Customer Strategy & Thought Leadership.
- ❖ Business Process Transformation.
- ❖ Lean Sigma, Program & Change Management.
- ❖ Performance Management & Business Controls.
- ❖ Featured presenter at several national conferences including:
  - Blues Conference May 2014 in Florida
  - “DestinationCRM 2007 Conference” in New York, NY
  - “Thought Leadership Summit” in San Jose, CA

## WORK EXPERIENCE...In Brief

- ❖ Twenty years progressively responsible Fortune 100 business and public-sector strategy development and implementation (e.g. EDS, GM, VSP, HP, BSC).
- ❖ Demonstrated success in leading a variety of complex business programs, initiatives across different industry functions and on a global, national and regional basis.
- ❖ Ten plus years directing large Customer Transformation efforts including leading all efforts to complete the largest technology merger in corporate America history.
- ❖ Companies initiatives delivered hundreds of millions in savings & increased revenue by as much as 30%.

## FACULTY PROFILE

Adjunct Faculty at UC Davis & Sacramento State Business Schools.

## PROFESSOR CYRUS' FAVORITE LEADERSHIP PRINCIPLE

“Everybody Teaches...Everybody Learns”