

2023-24 CATALOG YEAR

# QAMO

## QUANTITATIVE ANALYSIS OF MARKETS & ORGANIZATIONS MAJOR

Quantitative Analysis of Markets and Organizations (QAMO) teaches you to apply economics to business problems with an emphasis on game theory and econometrics.

Admission to the Quantitative Analysis of Markets & Organizations (QAMO) major is competitive. Please visit [Eccles.link/QAMO-admission](https://eccles.link/QAMO-admission) for information about admission criteria and policies. Application requires a personal statement (describing academic interests and career goals), current resume, and a Degree Audit. Students should prepare these materials prior to submitting.

In addition to completing the University of Utah's Core requirements, students seeking a Bachelor's Degree in QAMO must complete the courses below.

Students can find full course descriptions and requisite details in the general catalog at [catalog.utah.edu](https://catalog.utah.edu) and on the class schedule.

**Emphases and Minors:** QAMO students earn the Business Economics & Analytics emphasis automatically. Interested students can enrich their QAMO major by adding one additional emphasis in a business subject. A QAMO emphasis is available in the following subjects: Entrepreneurship, Finance, Marketing, or Operations & Supply Chain. Students interested in enriching their QAMO major with course material in Accounting, Information Systems or Management should pursue the minor in those subjects.

Make an appointment with your academic advisor at [Eccles.link/youradvisor](https://eccles.link/youradvisor) to confirm your path to graduation.

### QUANTITATIVE PREPARATION: 11 CREDITS

		CLASS	PREREQUISITES
	4	<b>MATH 1210 – Calculus I (QA/QB)</b> Will accept a score $\geq 4$ on the AP Calculus AB exam or a score $\geq 3$ on the AP Calculus BC exam. Will accept MATH 1310.	See catalog or details in schedule of classes for pre-requisites
	4	<b>MATH 1220 – Calculus II (QA/QB)</b> Will accept a score $\geq 4$ on the AP Calculus BC exam. Will accept MATH 1320	See catalog or details in schedule of classes for pre-requisites

		CLASS	PREREQUISITES
	3	<b>College-Level Statistics</b> QAMO 3100, Math 1070 (B or better), BCOR 2030 (B or better), "3" on the AP Statistics exam or ECON 3640	Consult advisor.

**CORE:** 27 CREDITS

		CLASS	PREREQUISITES
	3	<b>BUS 1050 or 1051 – Foundations of Business Thought</b>	
	3	<b>BUS 2011 (Earn B+ or better) – Honors Introduction to Quantitative Business Economics</b>  OR  <b>QAMO 3010 – Business Economics</b>	B+ or better in MATH 1100, 1210, or AP Calc AB score of 3+, or B or higher in MATH 1220 <u>and</u> member of the Business Scholars program or Honors College or Department Consent  C or better in MATH 1210 or MATH 1220 or MATH 1310 or MATH 1320 or MATH 1250 or AP Calculus BC score of 3+ or AP Calculus AB score of 4+
	3	<b>QAMO 3020 – Game Theory</b>	C- or better in QAMO 3010 or QAMO 3015 or B+ or better in BUS 2011 <u>and</u> B+ or better in MATH 1220 or MATH 1320 or MATH 1260 or AP Calculus BC score of 4+ or Full major in QAMO
	3	<b>QAMO 4700 – Business Econometrics I</b> <i>Typically spring only</i>	C- or better in QAMO 4651 or ECON 4651 or MATH 3080
	3	<b>QAMO 4800 – Business Econometrics II</b> <i>Typically fall only</i>	C- or better in QAMO 4700
	3	<b>QAMO 3201 – Money &amp; Banking for Business Economics &amp; Analytics</b> <i>Typically spring only</i>	B+ or better in MATH 1220 or MATH 1320 or MATH 1260 or MATH 1321 or AP Calculus BC score of 4+ or Full major in QAMO  Note: ECON 3200 <b>NOT</b> accepted as a substitute for 3201. Consult advisor.

		CLASS	PREREQUISITES
	3	<b>QAMO 4011 – Intermediate Microeconomic Analysis for Business Economics &amp; Analytics</b>	B+ or better in MATH 1220 or MATH 1320 or MATH 1260 or MATH 1321 or AP Calculus BC score of 4+ or Full major in QAMO  Note: ECON 4010 <b>NOT</b> accepted as a substitute for 4011
	3	<b>QAMO 4651 – Principles of Econometrics for Business &amp; Analytics</b> <i>Typically fall only</i>	B+ or better in MATH 1220 or MATH 1320 or MATH 1260 or MATH 1321 or AP Calculus BC score of 4+ or Full major in QAMO <u>and</u> B or better in MATH 1070 or BCOR 2030 or C- or better in ECON 3640 or AP Stats score of 3+  Note: ECON 4650 <b>NOT</b> accepted as a substitute for 4651

Complete 1 of the following:

		CLASS	PREREQUISITES
	3	<b>ACCTG 5050 – Accounting Fundamentals</b> Please note that ACCTG 5050 was previously taught under the course number ACCTG 3600.	
	3	<b>ENTP 5772 - Entrepreneurial Marketing</b>	Full major in QAMO
	3	<b>ENTP 5776 - Entrepreneurial Analytics</b>	Full major in QAMO
	3	<b>FINAN 5050 - Financial Management</b> Please note that FINAN 5050 was previously taught under the course number FINAN 3040.	Full major in QAMO
	3	<b>FINAN 5530 - Python for Quantitative Finance</b>	Full major in QAMO <u>AND</u> B or better in FINAN 5050 <u>AND</u> 3.5+ U of U GPA
	3	<b>IS 4410 - Information Systems</b>	Full major in QAMO
	3	<b>IS 4420 - Database Fundamentals</b>	Full major in QAMO <u>AND</u> C- or better in IS 4410
	3	<b>IS 4485 - Programming with Python</b>	Full major in QAMO <u>AND</u> C- or better in IS 4410

		CLASS	PREREQUISITES
	3	<b>MGT 3000 - Principles of Management</b> Please note that MGT 3000 was previously taught under the course number MGT 3680	
	3	<b>MKTG 3000 – Marketing Vision</b> Please note that MKTG 3000 was previously taught under the course number MKTG 3010	Full major in QAMO
	3	<b>STRAT 3410 - Business Law: The Commercial Environment</b>	Department Consent
	3	<b>STRAT 3700 - Strategic Management</b>	Department Consent
	3	<b>STRAT 5800 - Strategic Leadership: Goff Trailblazers</b>	Instructor Consent
	1-5	<b>STRAT 5850 - Special Topics Strategy</b>	Instructor Consent
	3	<b>OSC 5100 - Operations and Supply Chain Management</b> Please note that OSC 5100 was previously taught under the course number OSC 3660.	Full major in QAMO
	3	<b>OSC 5500 - Visual Analytics for Business</b>	Full major in QAMO
	3	<b>OSC 5610 - Practical Management Science</b>	Full major in QAMO
	3	<b>1, 3-credit Upper-division (3000-level+) Eccles School course</b> Consult with QAMO Department to obtain approval	Department Consent

Note: Courses may not be used to also count as a requirement for an emphasis area, minor, or double major. To satisfy the requirement, an additional course will need to be chosen from the list above.

## **ELECTIVES:** 12 CREDITS

		CLASS	PREREQUISITES
	3	<b>QAMO 5010 – Economics of Strategy</b>	C- or higher in QAMO 3010 or QAMO 3015 or B+ or better in BUS 2011
	3	<b>QAMO 5020 – Personnel Economics</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800
	3	<b>QAMO 5030 – Economics of Organization</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800
	3	<b>QAMO 5040 – Non-Market Environments</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800

		CLASS	PREREQUISITES
	3	<b>QAMO 5050 – Contracts and Bargaining</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800
	3	<b>QAMO 5060 – Economics of Business Taxation</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800
	3	<b>QAMO 5070 – Design of Markets &amp; Institutions</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800
	3	<b>QAMO 5080 – Information Economics</b>	C- or better in QAMO 3020 <u>and</u> Co-requisite: QAMO 4800
	3	<b>QAMO 5120 – Stakeholder Economics</b>	C- or better in QAMO 5010 or QAMO 4010 <u>and</u> C- or better in QAMO 3020 <u>and</u> C- or better in BUS 1050 or BUS 1051
	3	<b>QAMO 5130 – Voting in Public and Corporate Sectors</b>	C- or better in QAMO 3020 <u>and</u> QAMO 4700 or QAMO 3030
	3	<b>QAMO 5140 – The Analysis and Interpretation of Economic Data</b>	C- or better in BUS 2010, BUS 2011 or QAMO 3010 <u>and</u> C- or better in QAMO 4651 or ECON 4651 or MATH 3080
	3	<b>QAMO 5150 - The Business of Modern Agriculture: Markets, Commodities, and Futures</b>	C- or better in QAMO 4700 or QAMO 3030 <u>and</u> QAMO 4011 or ECON 4011 <u>and</u> C- or better in QAMO 3010 or B+ or better in BUS 2011
	3	<b>QAMO 4999 – Honors Thesis</b>	C- or better in QAMO 3020 <u>and</u> Member of the Honors College and Department Consent Co-requisite: QAMO 4800

# EMPHASES

Please meet with your academic advisor to discuss emphases requirements in more detail and for important information.

## ENTREPRENEURSHIP EMPHASIS (OPTIONAL): 15 CREDITS

		CLASS	PREREQUISITES
	3	<b>ENTP 5770 – Business Discovery &amp; Creation</b>	Full major status in QAMO <u>or</u> Department Consent
	3	<b>ENTP 5771 – Business Model Innovation</b>	Full major status in QAMO <u>or</u> Department Consent
	3	<b>ENTP 5870 – The Foundry</b>	Full major status in QAMO <u>or</u> Department Consent

Complete 2 of the following:

		CLASS	PREREQUISITES
	3	<b>ENTP 5772 – Entrepreneurial Marketing</b>	Full major status in QAMO
	3	<b>ENTP 5773 – Forming &amp; Funding the Entrepreneurial Firm</b>	Full major or minor status in Entrepreneurship or instructor consent
	3	<b>ENTP 5776 – Entrepreneurial Analytics</b>	Full major or minor status in Entrepreneurship or instructor consent
	3	<b>ENTP 5800 – Poverty Alleviation and Entrepreneurship</b>	Department Consent

## FINANCE EMPHASIS (OPTIONAL): 15 CREDITS

Complete 1 of the following:

		CLASS	PREREQUISITES
	3	<b>ACCTG 5050 – Accounting Fundamentals</b> Will accept ACCTG 3000, ACCTG 3600 or ACCTG 2600	
	4	<b>BCOR 3010 – Business Fundamentals - Accounting</b>	Corequisites: BCOR 3020 <u>and</u> BCOR 3030 <u>and</u> BCOR 3040 <u>and</u> BCOR 3050 3010 <u>and</u> full major status in the Eccles School

Complete 1 of the following:

		CLASS	PREREQUISITES
	3	<b>FINAN 5050 – Financial Management</b> Will accept FINAN 3040 or 3041	Full major status in QAMO
	2	<b>BCOR 3020 – Business Fundamentals – Finance</b>	Corequisites: BCOR 3020 <u>and</u> BCOR 3030 <u>and</u> BCOR 3040 <u>and</u> BCOR 3050 3010 <u>and</u> full major status in the Eccles School

Complete 9 credits of the following:

		CLASS	PREREQUISITES
	3	<b>FINAN 4031 – Honors Corporate Finance</b>	B or better in BCOR 3020 or FINAN 5050 <u>and</u> B or better in BCOR 3010 or ACCTG 5050 <u>and</u> full major status in QAMO <u>and</u> 3.5+ UofU GPA
	3	<b>FINAN 4070 – Investments</b>	C- or better in BCOR 3020 or FINAN 5050 <u>and</u> C- or better in BCOR 3010 or ACCTG 5050 <u>and</u> full major status in QAMO
	3	<b>FINAN 5070 – Advanced Investments</b>	C- or better in FINAN 4070 or FINAN 3050 <u>and</u> full major status in QAMO

		CLASS	PREREQUISITES
	3	<b>FINAN 5031 – Honors Advanced Valuation</b>	<b>FINAN 5031:</b> B or better in BCOR 3020 OR FINAN 5050 <u>and</u> B or better in BCOR 3010 or ACCTG 5050 <u>and</u> B or better in FINAN 4030 or 4031 <u>and</u> full major status in QAMO <u>and</u> 3.5+ UofU GPA
	3	<b>FINAN 5380 – Advanced Financial Modeling for Investments</b>	C- or better in FINAN 4070 OR FINAN 3050 or FINAN 5050 <u>and</u> C- or better in ACCTG 2600 or ACCTG 3000 or ACCTG 5050 or BCOR 3010 <u>and</u> full major status in QAMO
	3	<b>ACCTG 5610 – Interpreting Financial Statements</b>	Full major in QAMO
	3	<b>FINAN 5520 – Advanced Financial Modeling for Corporate Valuation</b>	B or better in BCOR 3020 or FINAN 3040 or FINAN 3041 or FINAN 5050 <u>and</u> full major status in QAMO <u>and</u> 3.5+ UofU GPA
	3	<b>FINAN 5530 – Python for Quantitative Finance</b>	B or better in BCOR 3020 or FINAN 3040 OR FINAN 3041 or FINAN 5050 <u>and</u> C- or better in ACCTG 2600 or ACCTG 3000 or ACCTG 5050 or BCOR 3010 <u>and</u> full major status in QAMO <u>and</u> 3.5+ UofU GPA
	0.5-3	<b>FINAN 5880 – Honor Student Investment Fund</b>	Department Consent



## MARKETING EMPHASIS (OPTIONAL): 12 CREDITS

		CLASS	PREREQUISITES
	3	<b>MKTG 3000 – Marketing Vision or MKTG 3010/3011</b>  OR  <b>BCOR 3040 – Principles of Marketing</b>	Full major in QAMO   Corequisites: BCOR 3010 <u>and</u> BCOR 3030 <u>and</u> BCOR 3040 <u>and</u> BCOR 3050

Complete 3 of the following:

		CLASS	PREREQUISITES
	3	<b>MKTG 4020 – Marketing Management</b>	C- or better in MKTG 3010 or 3011, MKTG 3000, or BCOR 3040 <u>and</u> full major status in QAMO
	3	<b>MKTG 4310 – Digital Marketing &amp; Analytics</b>	C- MKTG 3010 or 3011, MKTG 3000, or BCOR 3040 <u>and</u> full major status in QAMO
	3	<b>MKTG 4450 – Marketing Research</b>	C- MKTG 3010 or 3011, MKTG 3000, or BCOR 3040 <u>and</u> full major status in QAMO
	3	<b>MKTG 4500 – Introduction to Advertising</b>	C- or better in MKTG 3010 or 3011, MKTG 3000, or BCOR 3040 <u>and</u> full major status in QAMO
	3	<b>MKTG 4600 – Marketing Analytics</b>	C- or better in MKTG 3010 or 3011, MKTG 3000, or BCOR 3040 <u>and</u> full major status in QAMO
	3	<b>MKTG 4770 – Consumer Insights and Analytics</b>	C- or better in 3010 or 3011, MKTG 3000, or BCOR 3040 <u>and</u> full major status in QAMO

## OPERATIONS & SUPPLY CHAIN EMPHASIS (OPTIONAL): 15 CREDITS

Complete the following:

		CLASS	PREREQUISITES
	3	<b>OSC 5100/5101 or 3660/3661 – Operations Management</b>	Full major status in QAMO
	3	<b>OSC 5610 – Practical Management Science</b>	Full major status in QAMO
	3	<b>OSC 5620 – Global Supply Chain Management</b>	C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661 <u>and</u> Full major status in QAMO

Complete 2 of the following:

		CLASS	PREREQUISITES
	3	<b>IS 4420 – Database Fundamentals</b>	C- or better in IS 4410 or IS 4411 <u>and</u> full major status in QAMO
	3	<b>OSC 5450 – Simulation of Business Processes</b>	C- or better in OSC 3440 <u>and</u> full major status in QAMO
	3	<b>OSC 5500 – Visual Analytics</b>	Full Major status in QAMO
	3	<b>OSC 5630 – Production Planning and Control</b>	C- or better in BCOR 3050 <u>and</u> full major status in QAMO Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661
	3	<b>OSC 5640 – Project Management</b>	Full major status in QAMO Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661
	3	<b>OSC 5650 – Six Sigma for Managers</b>	C- or better in OSC 3440 <u>and</u> Full major status in QAMO or Instructor Consent Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661

		CLASS	PREREQUISITES
	3	<b>OSC 5670 – Managing Service Operations</b>	C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661 OR BCOR 3050 <u>and</u> Full major status in QAMO or Instructor Consent Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661