

2024-25 CATALOG YFAR

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 <u>Eccles.link/QAMO-admission</u> 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 <u>catalog.utah.edu</u> 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 <u>Eccles.link/youradvisor</u> to confirm your path to graduation.

QUANTITATIVE PREPARATION: 11 CREDITS

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



		CLASS	PREREQUISITES
	QAMO 3100 - Probability and Statistics for QAMO	C- or better in MATH 1210 or MATH 1220 or MATH 1310 or MATH 1320 OR AP Calculus	
			BC score of 3+ <u>OR</u> AP Calculus AB score of
			4+ or better <u>AND</u> Corequisite: BUS 2011 or QAMO 2011 or QAMO 3010

CORE: 27 CREDITS

	CLASS	PREREQUISITES
3	MGT 1050 or MGT 1051 – Foundations of Business Thought Formerly BUS 1050/1051	
3	QAMO 2011 (Earn B+ or better) – Honors Introduction to Quantitative Business Economics Formerly BUS 2011 OR QAMO 3010 – Business Economics	Department Consent Note: QAMO 2011 is intended for freshmen students C or better in MATH 1210 or MATH 1220 or MATH 1310 or MATH 1320 OR AP Calculus BC score of 3+ OR AP Calculus AB score of 4+
3	QAMO 3020 – Game Theory	C- or better in QAMO 3010 or BUS 2011 or QAMO 2011 AND B+ or better in MATH 1220 OR MATH 1320 OR AP Calculus BC score of 4+ OR QAMO MAJOR AND C- or better in ECON 3640 or QAMO 3100 OR B or better in MATH 1070 or BCOR 2030 OR AP Stats score of 3+
3	QAMO 4700 – Business Econometrics I Typically spring only	C- or better in QAMO 4651 <u>OR MATH 3080</u>
3	QAMO 4800 – Business Econometrics II Typically fall only	C- or better in QAMO 4700



	CLASS	PREREQUISITES
3	QAMO 3201 – Money & Banking for Business Economics & Analytics Typically spring only	B+ or better in MATH 1220 or MATH 1320 or MATH 1321 <u>OR</u> AP Calculus BC score of 4+ <u>OR</u> Full major in QAMO Note: ECON 3200 NOT accepted as a substitute for QAMO 3201.
3	QAMO 4011 – Intermediate Microeconomic Analysis for Business Economics & Analytics	B+ or better in MATH 1220 or MATH 1320 or MATH 1321 <u>OR</u> AP Calculus BC score of 4+ <u>OR</u> Full major in QAMO Note: ECON 4010 NOT accepted as a substitute for QAMO 4011.
3	QAMO 4651 – Principles of Econometrics for Business & Analytics Typically fall only	B+ or better in MATH 1220 or MATH 1320 or MATH 1321 <u>OR</u> AP Calculus BC score of 4+ <u>OR</u> Full major in QAMO <u>AND</u> B or better in MATH 1070 or BCOR 2030 <u>OR</u> C- or better in ECON 3640 or QAMO 3100 <u>OR</u> AP Stats score of 3+ Note: ECON 4650 NOT accepted as a substitute for QAMO 4651.

Complete 1 of the following:

	CLASS	PREREQUISITES
3	ACCTG 5050 – Accounting Fundamentals	
3	ENTP 5772 - Entrepreneurial Marketing	Full Major in QAMO
3	ENTP 5776 - Entrepreneurial Analytics	Full Major in QAMO
3	FINAN 5050 - Financial Management	Full Major in QAMO
3	FINAN 5530 - Python for Quantitative Finance	Full Major in QAMO <u>AND</u> B or better in FINAN 5050 <u>AND</u> 3.5+ U of U GPA
3	IS 3060 - Information Systems Formerly IS 4410	Full Major in QAMO



	CLASS	PREREQUISITES
3	IS 4420 - Database Fundamentals	Full Major in QAMO <u>AND</u> C- or better in IS 4410 OR IS 3060
3	IS 4485 - Programming with Python	Full Major in QAMO <u>AND</u> C- or better in IS 4410 OR IS 3060
3	MGT 3000 - Principles of Management	
3	MKTG 3000 – Marketing Vision	Full major in QAMO
3	STRAT 3410 - Business Law: The Commercial Environment	Department Consent
3	STRAT 3700 - Strategic Management	Department Consent
3	STRAT 5800 - Strategic Leadership: Goff Trailblazers	Instructor Consent
3	STRAT 5820 – Strategic Leadership: Goff Scholars	Instructor Consent
1-5	STRAT 5850 - Special Topics Strategy	Instructor Consent
3	OSC 5100 - Operations and Supply Chain Management Formerly OSC 3660	Full Major in QAMO
3	OSC 5500 - Visual Analytics for Business	Full Major in QAMO
3	OSC 5610 - Practical Management Science	Full Major in QAMO
3	1, 3-credit Upper-division (3000-level+) Eccles School course	Department Consent
	Consult with QAMO Department to obtain approval	

Note: Course 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	QAMO 5010 – Economics of Strategy	C- or higher in QAMO 3010 <u>OR</u> B+ or better in BUS 2011 or QAMO 2011
3	QAMO 5020 – Personnel Economics	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800



	CLASS	PREREQUISITES
3	QAMO 5030 – Economics of Organization	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800
3	QAMO 5040 – Non-Market Environments	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800
3	QAMO 5050 – Contracts and Bargaining	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800
3	QAMO 5060 – Economics of Business Taxation	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800
3	QAMO 5070 – Design of Markets & Institutions	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800
3	QAMO 5080 – Information Economics	C- or better in QAMO 3020 <u>AND</u> Co-requisite: QAMO 4800
3	QAMO 5120 – Stakeholder Economics	C- or better in QAMO 5010 <u>AND</u> C- or better in QAMO 3020 <u>AND</u> C- or better in BUS 1050 or BUS 1051 or MGT 1050 or MGT 1051
3	QAMO 5130 – Voting in Public and Corporate Sectors	C- or better in QAMO 3020 <u>AND</u> QAMO 4700
3	QAMO 5140 – The Analysis and Interpretation of Economic Data	C- or better in QAMO 3010 or BUS 2011 or QAMO 2011 <u>AND</u> QAMO 4651 or MATH 3080 <u>AND</u> QAMO 4011
3	QAMO 5150 - The Business of Modern Agriculture: Markets, Commodities, and Futures	C- or better in QAMO 4700 <u>AND</u> QAMO 4011 <u>AND</u> C- or better in QAMO 3010 <u>OR</u> B+ or better in BUS 2011 or QAMO 2011
2	QAMO 5550: Roadside MBA Note: To earn full elective credit, also add a 1 credit version of QAMO 5060	C- or better in BUS 2010 or BUS 2011 or QAMO 3010 or QAMO 2011 or QAMO 2010 AND QAMO 5010 or STRAT 3700
3	QAMO 4999 – Honors Thesis	C- or better in QAMO 3020 <u>AND</u> Member of the Honors College and Department Consent <u>AND</u> Co-requisite: QAMO 4800



EMPHASES

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

ENTREPRENEURSHIP EMPHASIS (OPTIONAL): 15 CREDITS

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

Complete 2 of the following:

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



FINANCE EMPHASIS (OPTIONAL): 15 CREDITS

Complete 1 of the following:

	CLASS	PREREQUISITES
3	ACCTG 5050 – Accounting Fundamentals	
4	BCOR 3010/ACCTG 3100 – Business Fundamentals - Accounting	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	FINAN 5050 – Financial Management	Full major status in QAMO
2	BCOR 3020/FINAN 3020 – Business Fundamentals – Finance	Corequisites: BCOR 3020 AND BCOR 3030 AND BCOR 3040 AND BCOR 3050 3010 AND full major status in the Eccles School

Complete 9 credits of the following:

	CLASS	PREREQUISITES
3	FINAN 4031 – Honors Corporate Finance	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	FINAN 4070 – Investments	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	FINAN 5070 – Advanced Investments	C- or better in FINAN 4070 <u>AND</u> full major status in QAMO



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



MARKETING EMPHASIS (OPTIONAL): 12 CREDITS

	CLASS	PREREQUISITES
3	MKTG 3000 – Marketing Vision	Full Major in QAMO
	OR	
		Coroguisitos, DCOD 2010 and DCOD
	BCOR 3040/MKTG 3040 – Principles of Marketing	Corequisites: BCOR 3010 and BCOR 3030 and BCOR 3040 and BCOR
		3050

Complete 3 of the following:

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



OPERATIONS & SUPPLY CHAIN EMPHASIS (OPTIONAL): 15 CREDITS

Complete the following:

	CLASS	PREREQUISITES
3	OSC 5100/5101 or OSC 3660/3661 – Operations Management	Full major status in QAMO
3	OSC 5610 – Practical Management Science	Full major status in QAMO
3	OSC 5620 – Global Supply Chain Management	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:

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	CLASS	PREREQUISITES
3	IS 4420 – Database Fundamentals	C- or better in IS 4410 or IS 4411 or IS 3060 <u>AND</u> full major status in QAMO
3	OSC 5450 – Simulation of Business Processes	C- or better in OSC 3440 <u>AND</u> full major status in QAMO
3	OSC 5500 – Visual Analytics	Full Major status in QAMO
3	OSC 5630 – Production Planning and Control	C- or better in BCOR 3050 AND full major status in QAMO Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661
3	OSC 5640 – Project Management	Full major status in QAMO Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661



	CLASS	PREREQUISITES
3	OSC 5650 – Six Sigma for Managers	C- or better in OSC 3440 AND Full major status in QAMO OR Instructor Consent Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661
3	OSC 5670 – Managing Service Operations	C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661 OR BCOR 3050 AND Full major status in QAMO OR Instructor Consent Corequisites: C- or better in OSC 5100 or OSC 5101 or OSC 3660 or OSC 3661