DECISION ANALYTICS, MASTER OF (M.D.A.) WITH A CONCENTRATION IN PRODUCTION AND OPERATIONS ANALYTICS

Program accreditation
Association to Advance Collegiate Schools of Business (http://www.aacsb.edu/)

Program goal

The Master of Decision Analytics provides students with knowledge of the statistical, mathematical and scientific skills and experience necessary to utilize advanced methods of data analysis for business decision-making.

Student learning goals

Students will be able to examine a situation/problem to determine a relevant data-driven analysis to provide valuable information for decision-makers and apply advanced analytical and quantitative skills to production and operations decisions. Students will be able to communicate analysis information and recommended decisions in a clear, ethical and transparent manner.

Student learning outcomes

Master of Decision Analytics core outcomes

1. **Database structures and query:** Students will have an understanding of basic database structures, be able to query databases and organize data for analysis.
2. **Quantitative skills:** Students will be able to identify appropriate data analysis approaches to address real-world problems. They will be able to perform the analysis using commercial software.
3. **Problem formulation:** Students will have the knowledge, skills and practice to take nonquantitative and perhaps ill-formed problems and issues and determine ways objective analysis can bring organization and insight to them. They will be able to determine data requirements and query available databases.
4. **Analytics applications:** Students will experience various applications of analytics in real situations.
5. **Technical communications and teamwork:** Students will be able to communicate analytical analysis and results effectively to nonquantitative audiences, and will develop skills in organizing, interacting and analyzing real problems as members of a team.

Production and operations analytics concentration-specific outcome

1. **Production and operations analytic skills**: Students will be able to analyze data to improve the performance of production and operations processes.

VCU Graduate Bulletin, VCU Graduate School and general academic policies and regulations for all graduate students in all graduate programs

The VCU Graduate Bulletin website documents the official admission and academic rules and regulations that govern graduate education for all graduate programs at the university. These policies are established by the graduate faculty of the university through their elected representatives to the University Graduate Council.

It is the responsibility of all graduate students, both on- and off-campus, to be familiar with the VCU Graduate Bulletin as well as the **Graduate School website** and academic regulations in individual school and department publications and on program websites. However, in all cases, the official policies and procedures of the University Graduate Council, as published on the VCU Graduate Bulletin and Graduate School websites, take precedence over individual program policies and guidelines.

Visit the academic regulations section for additional information on academic regulations for graduate students.

Degree candidacy requirements

A graduate student admitted to a program or concentration requiring a final research project, work of art, thesis or dissertation, must qualify for continuing master's or doctoral status according to the degree candidacy requirements of the student's graduate program. Admission to degree candidacy, if applicable, is a formal statement by the graduate student's faculty regarding the student's academic achievements and the student's readiness to proceed to the final research phase of the degree program.

Graduate students and program directors should refer to the following degree candidacy policy as published in the VCU Graduate Bulletin for complete information and instructions.

Visit the academic regulations section for additional information on degree candidacy requirements.

Graduation requirements

As graduate students approach the end of their academic programs and the final semester of matriculation, they must make formal application to graduate. No degrees will be conferred until the application to graduate has been finalized.

Graduate students and program directors should refer to the following graduation requirements as published in the Graduate Bulletin for a complete list of instructions and a graduation checklist.

Visit the academic regulations section for additional information on graduation requirements.

Other information

School of Business **policies and procedures for graduate students** are available on the school's website.

Apply online today. (https://www.vcu.edu/admissions/apply/graduate/)

Admission requirements

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.D.A.	Fall	Jul 1	
	Spring	Nov 1	
	Summer	Mar 1	

In addition to the general admission requirements of the VCU Graduate School (https://bulletin.vcu.edu/graduate/study/admission-graduate-study/admission-requirements/), applicants must submit an up-to-date resume.

International applicants may be required to submit an approved English proficiency score and/or course-by-course international transcript evaluation.

All applicants may opt to submit a GMAT or GRE score for consideration. Additional information can be found on the Graduate Studies in Business webpage (https://business.vcu.edu/prospective-students/graduate/admissions/#sob-content-1801062).

Degree requirements

The decision analytics degree provides students with knowledge of quantitative skills and experience in analyzing problems and using data for decision-making in a business environment. The concentration in production and operations analytics prepares students to analyze and interpret production and operations data with the goal of improving forecasting, demand planning and quality management. Depending upon individual student interests and adviser approval, the required nucleus is supplemented with relevant elective courses from within the School of Business or from outside departments.

In addition to the VCU Graduate School graduation requirements (https://bulletin.vcu.edu/academic-regs/grad/graduation-info/):

1. All students must have completed a course in calculus. Students must also be proficient at an intermediate level with a spreadsheet. These prerequisites can be met after admission to the program.
2. At the time of application, all undergraduate and graduate transcripts will be reviewed to determine if the following prerequisite courses and/or foundation course may be waived. A waiver may be awarded when a student demonstrates equivalent knowledge, such as completing the required undergraduate equivalent course to the satisfaction of the admission committee.

Prerequisite undergraduate and/or foundation courses

Prerequisite and/or foundation courses may be waived for students who present satisfactory equivalent preparation at either the undergraduate or graduate level. This determination is made by the faculty adviser at the time of admission.

Course	Title	Hours
Prerequisite undergraduate courses		
SCMA 212	Differential Calculus and Optimization for Business	3
or MATH 200	Calculus with Analytic Geometry I	
SCMA 301	Business Statistics I	3
Foundation course		
SCMA 524	Statistical Fundamentals for Business Management	3

Curriculum requirements

Course	Title	Hours
Required core courses		
INFO 601	Database Management	3
INFO 642	Artificial Intelligence for Business Applications	3
INFO 645	Prescriptive Analytics	3
INFO 648	Business Data Analytics	3
SCMA 632	Statistical Analysis and Modeling	3
Concentration courses		
SCMA 669	Developing and Implementing Forecasting Methods for Business	3
SCMA 675	Operations Management	3
SCMA 677	Quality Management and Six Sigma	3
Approved electives		
Select six credits from the following:		6
ACCT 507	Fundamentals of Accounting	
ACCT 608	Managerial Accounting Concepts	
ACCT 620	Accounting Research	
ACCT 621	Accounting Analytics	
ECON 501	Introduction to Econometrics	
ECON 612	Econometrics	
ECON 614	Mathematical Economics	
ECON 641	Econometric Time-series Analysis	
ECON 642	Panel and Nonlinear Methods in Econometrics	
FIRE 520	Financial Concepts of Management	
FIRE 540	Financial Analytics	
FIRE 610	Financial Modeling and Analysis	
FIRE 615	Foundations in Real Estate	
FIRE 621	Cases in Financial Management	
FIRE 622	Financial Intermediation and Analysis of Fixed-income Securities	
FIRE 623	Financial Management	
FIRE 626	Risk Management	
FIRE 627	Real Estate Development	
FIRE 629	Cases in Real Estate	
FIRE 630	Real Estate Valuation	
FIRE 635	Investments and Security Analysis	
FIRE 650	Derivatives	
FIRE 658	Real Estate Finance and Investments	
INFO 602	Big Data Analytics with Cloud Platforms	
INFO 617	AI-Driven Text Analysis for Business	
INFO 636	Securing Cloud Infrastructure	
INFO 646	Security Policy Formulation and Implementation	
INFO 658	Securing the Internet of Things	
INFO 664	Information Systems for Business Intelligence	
MGMT 642	Business Policy and Strategy	

MGMT 655	Entrepreneurship	
MGMT 657	Corporate Entrepreneurship	
MKTG 671	Marketing Management	
MKTG 675	Digital Marketing	
MKTG 676	Social Media Research	
MKTG 678	Marketing Analytics	
MKTG 679	Brand Strategy	
SCMA 602	Global Supply Chain Management	
SCMA 603	SAP ERP and Supply Chain Management	
SCMA 606	Supply Chain Innovation	
SCMA 615	Strategic Logistics Management	
Total Hours		**30**

The minimum number of graduate credit hours required for this degree is 30.

Students who complete the requirements for this degree will receive a Master of Decision Analytics.

Contact
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Program website: business.vcu.edu/academics/supply-chain-management-and-analytics/master-of-decision-analytics-evening-format/ (http://business.vcu.edu/academics/supply-chain-management-and-analytics/master-of-decision-analytics-evening-format/)