DEcision Analytics, Master of (M.D.A.)

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 the decision problems of businesses, organizations and society. Students will be able to communicate analysis information and recommended decisions in a clear, ethical and transparent manner.

Student learning 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.

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 at graduate.admissions.vcu.edu (http://www.graduate.admissions.vcu.edu).

Admission requirements

<table>
<thead>
<tr>
<th>Degree:</th>
<th>Semester(s) of entry:</th>
<th>Deadline dates:</th>
<th>Test requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.D.A.</td>
<td>Fall</td>
<td>Jul 1</td>
<td>GMAT or GRE*</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Nov 1</td>
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<tr>
<td></td>
<td>Summer</td>
<td>Mar 1</td>
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</tbody>
</table>

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

*Test requirements may be waived for candidates with an undergraduate or graduate degree from an accredited U.S. institution with a minimum GPA of 3.25. Waiver request information can be found on the Graduate Studies in Business webpage (https://business.vcu.edu/graduate-studies/how-to-apply/).
# 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. 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 (http://bulletin.vcu.edu/academic-regs/grad/graduation-info/):

1. All students must have completed a course in calculus and database systems. 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>Prerequisite undergraduate courses</strong></td>
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<tr>
<td>INFO 364</td>
<td>Database Systems</td>
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<tr>
<td>SCMA 212</td>
<td>Differential Calculus and Optimization for Business</td>
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<tr>
<td>or MATH 200</td>
<td>Calculus with Analytic Geometry I</td>
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<tr>
<td>SCMA 301</td>
<td>Business Statistics I</td>
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<tr>
<td><strong>Foundation course</strong></td>
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<tr>
<td>SCMA 524</td>
<td>Statistical Fundamentals for Business Management</td>
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## Curriculum requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Required core courses</strong></td>
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<tr>
<td>ECON 501</td>
<td>Introduction to Econometrics</td>
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<tr>
<td>INFO 610</td>
<td>Analysis and Design of Database Systems</td>
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<tr>
<td>SCMA 632</td>
<td>Statistical Analysis and Modeling</td>
<td>3</td>
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<tr>
<td>SCMA 645</td>
<td>Advanced Decision Analytics</td>
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<td>SCMA 648</td>
<td>Business Data Analytics</td>
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<tr>
<td>SCMA 669</td>
<td>Developing and Implementing Forecasting Methods for Business</td>
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<tr>
<td><strong>Approved electives</strong></td>
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<tr>
<td>Select 12 credits from:</td>
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</tr>
<tr>
<td>ACCT 608</td>
<td>Managerial Accounting Concepts</td>
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<tr>
<td>ECON 612</td>
<td>Econometrics</td>
<td></td>
</tr>
<tr>
<td>ECON 614</td>
<td>Mathematical Economics</td>
<td></td>
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</tbody>
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ECON 641  Econometric Time-series Analysis
ECON 642  Panel and Nonlinear Methods in Econometrics
FIRE 610  Financial Modeling and Analysis
FIRE 629  Cases in Real Estate
FIRE 635  Investments and Security Analysis
INFO 609  Data-centric Re-engineering Analysis/ Planning
INFO 611  Data Re-engineering
INFO 614  Data Mining
INFO 616  Data Warehousing
INFO 632  Business Process Re-engineering
INFO 664  Information Systems for Business Intelligence
MGMT 642  Business Policy and Strategy
MKTG 673  Marketing Research
MKTG 678  Marketing Analytics
SCMA 602  Global Supply Chain Management
SCMA 603  SAP ERP and Supply Chain Management
SCMA 606  Supply Chain Innovation
SCMA 643  Applied Multivariate Methods
SCMA 675  Operations Management
SCMA 677  Quality Management and Six Sigma
SCMA 691  Topics in Supply Chain Management and Analytics
SCMA 697  Guided Study in Supply Chain Management
STAT 642  Design and Analysis of Experiments I
STAT 643  Applied Linear Regression
STAT 650  Design and Analysis of Response Surface Experiments

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

**Contact**

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**Program website:** business.vcu.edu/graduate/dsba.html (http://business.vcu.edu/graduate/dsba.html)