

INFORMATION SYSTEMS, MASTER OF SCIENCE (M.S.) WITH A CONCENTRATION IN DATA SCIENCE IN BUSINESS

Program accreditation

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

Program goal

The Master of Science in Information Systems program is designed to prepare students for specialized roles using information systems to support organizations. The program is intended to provide a graduate-level, business-technology-oriented curriculum that focuses on the design and development of information systems to solve real-world problems. Graduates of the program are expected to be able to take significant roles in planning, organizing, managing, designing, configuring and implementing systems using state-of-the-art technologies within organizations.

The data science in business concentration of the master's program has an information systems orientation to data science. It is designed to prepare students for specialized roles that involve using information systems concepts, methodologies to effectively and efficiently support knowledge discovery and associated data management activities in modern organizations.

Student learning outcomes

1. Students will be capable of communicating and networking effectively within their profession and within their organizations; serving the profession by applying this knowledge broadly; and maintaining key technical expertise in order to sustain required levels of competitiveness.
2. Students will have an understanding of information technology as it applies to business contexts and the skill to apply this technology effectively in specific circumstances.
3. Students will develop efficient and effective IS solutions using appropriate technologies that can deliver competitive advantages to organizations.
4. Students will understand IT systems management, which includes topics such as system availability; virtualization, change, storage, network, configuration and facilities management; capacity planning; business continuity; and green computing.

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.S.	Fall	Jul 1	GMAT or GRE*
	Spring	Nov 1	
	Summer	Mar 1	

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. Waiver request information can be found on the Graduate Studies in Business webpage (<https://business.vcu.edu/graduate-studies/how-to-apply/>).

Degree requirements

Students applying to the Master of Science in Information Systems must show evidence of competence in selected prerequisite areas of information systems including application programming, database, and systems analysis and design. Students enrolled as majors in the program who do not have a formal background or equivalent training must take the appropriate undergraduate courses to satisfy the prerequisites prior to taking master's program courses. Students without an accredited bachelor's degree or post-baccalaureate certificate in fields such as computer science or information systems will likely need to complete undergraduate prerequisite courses. Prerequisites are determined by the faculty adviser at the time of admission.

Course	Title	Hours
Prerequisite undergraduate courses		
INFO 350	Programming	3
INFO 361	Systems Analysis and Design	3
INFO 364	Database Systems	3

Curriculum requirements

Course	Title	Hours
Core courses		
INFO 610	Analysis and Design of Database Systems	3
INFO 620	Data Communications	3
INFO 630	Systems Development	3
INFO 640	Information Systems Management	3
INFO 644	Principles of Computer and Information Systems Security	3

Data science in business concentration electives

Select four of the following:		12
INFO 609	Data-centric Re-engineering Analysis/ Planning	
INFO 611	Data Re-engineering	
INFO 614	Data Mining	
INFO 616	Data Warehousing	
INFO 617	Text Analytics	
INFO 632	Business Process Re-engineering	
INFO 642	Decision Support and Intelligent Systems	

Approved elective

Select one of the following:		3
INFO 635	Ethical, Social and Legal Issues in Computer and Information Systems Security	
INFO 641	Strategic Information Systems Planning	
INFO 643	Information Technology Project Management	
INFO 646	Security Policy Formulation and Implementation	
INFO 658	Securing the Internet of Things	
INFO 664	Information Systems for Business Intelligence	
INFO 691	Topics in Information Systems	

INFO 693	Field Project in Information Systems	
SCMA 603	SAP ERP and Supply Chain Management	
SCMA 632	Statistical Analysis and Modeling	
SCMA 645	Advanced Decision Analytics	
SCMA 648	Business Data Analytics	
SCMA 669	Developing and Implementing Forecasting Methods for Business	
Total Hours		30

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

Accelerated opportunities

The department offers opportunities for qualified undergraduate students to earn both an undergraduate and graduate degree in a minimum of five years by completing approved graduate courses during the senior year of their undergraduate program. See the program page in the Undergraduate Bulletin for details.

Contact

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