Information Systems and Operations Management - Graduate Programs

The ISOM Department offers the MS in Business Analytics and the MS in Information Systems. These programs are AACSB-International accredited and STEM approved.

Our graduate students are prepared for advancement in rewarding and challenging careers in such fields as business analyst, systems analyst, project management, systems design, and business analytics. Other College of Business graduate students can enhance their expertise in specific areas by using Information Systems, Operations and Supply Management, and Business Statistics courses as electives.

Our advisors are:

Dr. Riyaz Sikora, Graduate Advisor MS Business Analytics and MS Information Systems

Dr. Santoso Budiman, Graduate Advisor MS Business Analytics

Dr. Kay-Yut Chen, Ph.D. Coordinator

    Statistics and Operations Management (Business Administration)

Dr. Sajib Datta, Graduate Advisor MS Information Systems

Dr. Jingguo Wang, Ph.D. Coordinator

    Information Systems (Business Administration)

Master of Science in Business Analytics (MSBA)

Objective

The Master of Science in Business Analytics is designed to prepare graduates to identify and implement opportunities for the strategic use of business analytics with an emphasis on business. Students gain knowledge of a broad range of disciplines and functions in the business as well as specialized knowledge of business analytics and its accompanying skill set. An intensive curriculum covering business intelligence, data mining, econometrics, marketing research, statistical techniques prepares students for careers in the field of business analytics.

Admission Requirements

Admission to the M.S. in Business Analytics (MSBA) program is based on completion of the general admission requirements of the Graduate School as specified under the Graduate Admissions Requirements and Procedures in the Graduate Catalog.

Unconditional Admission Without Committee Review

Applicants qualify for unconditional admission without the need for review by the Graduate Studies Committee if they meet the following set of unconditional admission criteria:

Unconditional Admission

Individuals who meet each of the following two conditions are given unconditional admission:

- Applicant holds an earned bachelor's degree from an AACSB-accredited college or university, or equivalent, with a minimum GPA of 3.00 on the last 60 hours of undergraduate work, and
- GMAT/GRE must have verbal and quantitative scores at the 50th percentile or higher.

Admission with Committee Review

Applicants who require committee review are considered for admission using the following factors, with no single factor used as the primary criterion for making admission decisions.

- Undergraduate and graduate GPA (overall, major, and last 60 hours) and program accreditation status of the applicant's degree granting institution;
- Score on the GMAT/GRE (including separate scores on the verbal and quantitative portions);
- Applicant's professional work experience and professional certification/licensure; and
- Letters of reference and personal statement provided by the applicant.

By considering the totality of the applicant's circumstances, including the factors listed above, the Graduate Studies Committee will evaluate an applicant's readiness to successfully complete the graduate program. Depending on the judgment of the committee, the decision may be to grant

unconditional admission, probationary admission, provisional admission, deferred admission, or to deny admission. The decision of the committee is final. An applicant whose native language is not English must demonstrate a sufficient level of skill with the English language to assure success in graduate studies as defined under Admissions Requirements and Procedures in the Graduate Catalog. International applicants must submit a TOEFL score or IELTS score that meets the standards as listed in the admission requirements.

Degree Requirements

The MSBA is a non-thesis program consisting of 33 semester hours to include the following required courses in the areas of business acumen and communication, data acquisition and architecture, and statistics and analytics. Electives sufficient to complete the program are selected with approval of the MSBA Graduate Advisor. When there is equivalent work/course experience, the student must meet with the MSBA Graduate Advisor to select alternate coursework.

Select one of the following Statistics courses:		3
BSTAT 5325	ADVANCED METHODS FOR ANALYTICS	
ECON 5336	APPLIED BUSINESS AND ECONOMICS DATA ANALYSIS I	
MANA 5329	HR METRICS AND ANALYTICS	
Plus the following required courses:		
ECON 5337	BUSINESS & ECONOMIC FORECASTING	3
ACCT 5307	MEASUREMENT AND ANALYSIS FOR BUSINESS DECISION-MAKING	3
MANA 5344	EVIDENCE-BASED MANAGEMENT	3
INSY 5336	PYTHON PROGRAMMING	3
INSY 5337	DATA WAREHOUSING AND BUSINESS INTELLIGENCE	3
INSY 5339	PRINCIPLES OF BUSINESS DATA MINING	3
INSY 5378	DATA SCIENCE: A PROGRAMMING APPROACH	3
INSY 5379	BUSINESS ANALYTICS CAPSTONE	3
Analytics elective courses approved by the Graduate Advisor		6
Total Hours		**33**

Transfer Credit

A maximum of 9 hours of advanced coursework may be transferred in from other AACSB-accredited schools if approved by the MSBA Graduate Advisor.

Master of Science in Information Systems (MSIS)

Objective

The Master of Science in Information Systems is designed to provide graduates with both a general knowledge of business and a specialized knowledge of information systems. Students are exposed to the theory, research, and practical applications of numerous information systems areas including management information systems, database management systems, systems analysis and design, and data communications; and may take electives in general systems concepts, electronic commerce, business analytics, problem formulation, computer science, management sciences, research, and other related fields. The program is designed to prepare students for information systems careers in business and industry, as well as in government and nonprofit organizations.

Admission Requirements

Admission to the M.S. in Information Systems (MSIS) program is based on completion of the general admission requirements as specified under the Graduate Admissions Requirements and Procedures in the Graduate Catalog.

Unconditional Admission Without Committee Review

Individuals who meet each of the following two conditions are given unconditional admission:

- Applicant holds an earned bachelor's degree from an AACSB-accredited college or university, or equivalent, with a minimum GPA of 3.00 on the last 60 hours of undergraduate work, and
- GMAT/GRE must have verbal and quantitative scores at the 50th percentile or higher.

Admission with Committee Review

Applicants who require committee review are considered for admission using the following factors, with no single factor used as the primary criterion for making admission decisions.

- Undergraduate and graduate GPA (overall, major, and last 60 hours) and program accreditation status of the applicant's degree granting institution;
- Score on the GMAT/GRE (including separate scores on the verbal and quantitative portions);
- Applicant's professional work experience and professional certification/licensure; and
- Letters of reference and personal statement provided by the applicant.

By considering the totality of the applicant's circumstances, including the factors listed above, the Graduate Studies Committee will evaluate an applicant's readiness to successfully complete the graduate program. Depending on the judgment of the committee, the decision may be to grant unconditional admission, probationary admission, provisional admission, deferred admission, or to deny admission. The decision of the committee is final. An applicant whose native language is not English must demonstrate a sufficient level of skill with the English language to assure success in graduate studies as defined under Admissions Requirements and Procedures in the Graduate Catalog. International applicants must submit a TOEFL score or IELTS score that meets the standards as listed in the admission requirements.

Degree Requirements

The Department of Information Systems and Operations Management provides two Master's tracks: a Thesis Option for those intending to later pursue a Ph.D. in Information Systems, and a Non-Thesis track, a traditional flexible option. The thesis track program provides preparation for entry into a Ph.D. program. The second option is the flexible non-thesis program enabling a degree candidate greater flexibility in designing their program.

The thesis option consists of a minimum of 30 semester hours

Master of Science in Information Systems: Thesis Option

BSTAT 5325	ADVANCED METHODS FOR ANALYTICS	3
INSY 5337	DATA WAREHOUSING AND BUSINESS INTELLIGENCE	3
INSY 5339	PRINCIPLES OF BUSINESS DATA MINING	3
INSY 5373	INFORMATION SYSTEMS PROJECT MANAGEMENT	3
Elective courses approved by the Graduate Advisor. Foundation courses may not be used as advanced electives.		12
Thesis work taken in the last semester.		6
Total Hours		30

The thesis student must be enrolled in six hours of thesis. Once the student is enrolled in the thesis course, continuous enrollment is expected. The student must be enrolled in six hours of thesis during the semester in which the thesis is defended and the final Master's Examination is unconditionally passed. The degree candidate must defend the thesis in a final oral examination open to all members of the Faculty.

The non-thesis option consists of 33 semester hours.

Master of Science in Information Systems: Thesis-Substitute Option

BSTAT 5325	ADVANCED METHODS FOR ANALYTICS	3
INSY 5337	DATA WAREHOUSING AND BUSINESS INTELLIGENCE	3
INSY 5339	PRINCIPLES OF BUSINESS DATA MINING	3
INSY 5373	INFORMATION SYSTEMS PROJECT MANAGEMENT	3
INSY 5375	MANAGEMENT OF INFORMATION TECHNOLOGIES	3
Elective courses approved by the Graduate Advisor. Foundation courses may not be used as advanced electives.		18
Total Hours		33

The thesis-substitute option electives can be chosen from a variety of offerings and can be customized to the student's interest. The student must meet with the MSIS Graduate Advisor to determine the appropriate coursework for the electives.

When there is equivalent coursework, the student must meet with the MSIS Graduate Advisor to select alternate coursework. An approved 3-credit hour graduate internship (INSY 5399 (https://catalog.uta.edu/search/?P=INSY%205399)) may also be taken as an elective. Students who do not have coursework in information systems will be required to take INSY 5309 or INSY 5336, INSY 5335, and INSY 5341 as part of their electives.

Transfer Credit

A maximum of 9 hours of advanced coursework may be transferred in from other AACSB-accredited schools if approved by the MSIS Graduate Advisor.

Graduate Certificate in Business Analytics

Objective

The Graduate Certificate in Business Analytics is designed to enable students to acquire critical data science and analytics skills and apply these to solve traditional and new problems in their respective domains without having to enroll in a full Masters degree program.

Admission

Applicants qualify for admission into the Graduate Certificate in Business Analytics program if they meet the following admission criteria:

• An earned bachelor's degree from an accredited university, or equivalent, with a minimum GPA of 3.00 in the last 60 hours of undergraduate course work,

• 2 or more years of work experience in a related field, and

• Adequate quantitative skill demonstrated through college-level course work and/or work experience.

Course Requirements

Students must complete 15 graduate credit hours comprised of four required courses and one elective course, and maintain a grade point average of 3.0 or higher. All courses must be completed at UTA.

BSTAT 5325	ADVANCED METHODS FOR ANALYTICS	3
INSY 5336	PYTHON PROGRAMMING	3
INSY 5339	PRINCIPLES OF BUSINESS DATA MINING	3
INSY 5377	WEB AND SOCIAL ANALYTICS	3
Select one from the following list:		3
INSY 5337	DATA WAREHOUSING AND BUSINESS INTELLIGENCE	
INSY 5378	DATA SCIENCE: A PROGRAMMING APPROACH	
ECON 5337	BUSINESS & ECONOMIC FORECASTING	
FINA 5376	FINANCIAL DATA ANALYTICS	
MANA 5329	HR METRICS AND ANALYTICS	
MARK 5337	MARKETING ANALYTICS AND INFORMATION MANAGEMENT	
Other course upon approval of Graduate Advisor		
Total Hours		**15**

Course credit earned through the certificate can be used to meet course requirements for the MS Business Analytics if the student is accepted into the MSBA program.

Executive Certificate in Business Analytics

Objective

In keeping with the mission of The University of Texas at Arlington to provide lifelong learning opportunities, the Department of Information Systems and Operations Management now offers an Executive Certificate in Business Analytics. The Executive Certificate in Business Analytics program will prepare management practitioners in advanced data analytics methodologies and enable them to practice data-driven decision making. This post-baccalaureate Executive Certificate provides an educational opportunity that is narrower in scope, and shorter in duration, than graduate degree programs. The target audience of this certificate program includes working professionals who currently hold full-time employment and are interested in learning and applying business analytics techniques in their current roles but don't have the time or motivation to enroll in a full time traditional MS degree program. This program is usually offered in collaboration with a sponsoring organization.

Admission

Students must have the following:

- Bachelor's degree from an accredited university
- At least 3 years of relevant work experience
- Personal statement from the candidate
- Reference letter from supervisor/manager
- Successful interview with Program Advisor

Course Requirements

Students must complete 12 graduate credit hours and maintain a grade point average of 3.0 or higher. The certificate will be completed in about 6 months.

BSTAT 5325	ADVANCED METHODS FOR ANALYTICS	3
INSY 5339	PRINCIPLES OF BUSINESS DATA MINING	3
INSY 5376	BIG DATA ANALYTICS	3

INSY 5378	DATA SCIENCE: A PROGRAMMING APPROACH	3
Total Hours		**12**

Use of Courses Toward Degree Program

Students that initially enroll in the Executive Certificate in Business Analytics may later use up to 12 hours of coursework from the Certificate program toward the Master of Science in Business Analytics degree.