EMERGING TECHNOLOGIES continue to dramatically alter the way business
and life is conducted. Those who wish to have a leading role in
developing and implementing next generation information systems
should consider a career in management information systems, including
the sub-fields of data science and information assurance/cybersecurity.
The need for knowledgeable workers with expertise in these information
systems driven areas will continue to increase at substantial rates for the
foreseeable future.

The Department of Management Science and Information Systems
offers an undergraduate major in management information systems
(MIS) with possible options of data science and information assurance
(IA). It also offers graduate studies leading to master's degrees in
information assurance (MSIA) and management information systems
(MIS). Also, PhD degrees in business administration with an option
in MIS, information assurance, management science and operations
management can be earned.

Undergraduate degrees in MIS require a common foundation of work
in disciplines such as mathematics, statistics, behavioral sciences and
communications. A second tier of required work consists of the courses
required for all Spears School of Business students such as economics,
marketing, accounting and management. The third tier of classes are
core MIS courses that develop information technology, data science and
cybersecurity expertise in students.

**Management Information Systems (MIS)**

The MIS degree focuses on the business applications of information
technology. This includes emphasizing necessary skills required in
the analysis, development, evaluation and implementation of various
information and communication technologies critical for today's global
organizations. The integration of information technology throughout
all aspects of business coupled with the critical need for responsive
information systems has created a strong demand for graduates with
expertise in information systems and business administration.

Once MIS students satisfy the first two tiers of requirements mentioned
above, they will focus on specialized courses in areas such as systems
analysis and design, web and mobile app development, database design
and management, data science techniques and applications, data
communications and cybersecurity, among other relevant areas.

**Data Science**

The data science option allows developing aptitudes in quantitative tools
that are especially critical in today’s data-driven organization. Additional
course work in statistics, and descriptive, predictive and prescriptive
analytics is possible with a Data Science option.

**Information Assurance**

The Information Assurance option uses the expertise in the department
that led OSU to be named a National Center of Academic Excellence
in Information Assurance Education and Research by the NSA and the
Department of Homeland Security. This option provides students with
in-depth study and hands-on analysis of critical organizational issues in
information assurance and cybersecurity.