

# INFORMATION SCIENCE (INSC)

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INSC 521: Database Design Concepts

3 Credits

The requirements capture, design, and development of relational database applications; analysis of business requirements and development of appropriate database systems.

**Prerequisite:** completion of all IN SC or SWENG core courses or with instructor or division approval

INSC 525: Applied Data Mining

3 Credits

Functional overviews of algorithms used in data mining will be presented and contemporary data mining software used to conduct a project.

**Prerequisite:** SC&IS535 or with instructor or division approval

INSC 526: Business Process Management and Integration

3 Credits

Design and development of business processes that align business objectives with Information Technology (IT) systems.

INSC 531: Information Technology Law

3 Credits

Examines the legal concepts/issues applicable to the field of information technology and to information technology, software engineering, and computer professionals.

**Prerequisite:** completion of all IN SC core courses or with instructor or division approval

INSC 539: Information Science Emerging Topics

3 Credits

Computing and network technologies are constantly changing. However, they must be well adopted to help transform enterprise information systems to better support business operations and management. This course will explore various emerging theories and technologies in information science, including at least cloud computing, mobile application, Internet of things, blockchain, machine learning, and artificial intelligence. Students will learn how the emerging theories and technologies can be applied to addressing the weakness of legacy enterprise information systems in which the emerging technologies are not employed yet.

**Prerequisite:** taken as the final course in the Master of Science in Information Science degree, or with instructor's permission

INSC 561: Web Security and Privacy

3 Credits

A web-centric look at the latest techniques and practices in computer security as they apply to the Internet.

**Prerequisite:** CSE 543 or IST 815

INSC 594: Research Topics

1-15 Credits/Maximum of 15

Supervised student activities on research projects identified on an individual or small-group basis.

INSC 831: Contemporary Information Systems Architecture

3 Credits

Computing and network technologies are constantly changing and must be adopted appropriately to help transform enterprise information systems that better support business operations and management. This course will investigate the evolution of information systems architecture. Students will learn to employ contemporary information systems architecture to enhance IT support for business operations and management in organizations. Students will explore contemporary information systems architecture from different perspectives, including perspectives in technology, business operations, and management.

INSC 846: Network and Predictive Analytics for Socio-Technical Systems

3 Credits

The objective of this course is to provide a foundation in the principles of network and predictive analytics along with hands-on experience with statistical analysis software for studying the interrelatedness of cyber-social and cyber-technical aspects of our society as a whole that have transformed physical communities into virtual communities. Fundamental principles of network and predictive analytics, the importance of studying network structures, and how network structures can facilitate communication, coordination and cooperation will be discussed. Statistical analysis software will be used for analyzing the structure of an organization or a society as whole to detect and capture the dynamic patterns of group membership and structure, and predict threats, attacks, criminal behavior and evolution of criminal networks.

Cross-listed with: DAAN 846

INSC 897: Special Topics

1-9 Credits/Maximum of 999

Formal courses given on a topical or special interest subject which may be offered infrequently.