

INFORMATION SYSTEMS (IS)

IS 502 Advanced Programming	3 Credit hours	IS 603 Program for Artificial Intell	3 Credit hours
Grade Mode: Normal Grading Mode		An introduction to programming for artificial intelligence applications using Prolog.	
IS 510 Comptr Sys & Structured Prgm 2	3 Credit hours	Grade Mode: Normal Grading Mode	
A continuation of IS 500. Topics include algorithm development, manipulation of arrays and an introduction to dynamic data structures. (PR: IS 500 or consent)		IS 605 Systems Analysis and Design	3 Credit hours
Pre-req: IS 500.		This course focuses on analysis and design of information systems. Topics include system development approaches, UML design, system integration, system-oriented architecture and foundation. Introduction to information systems from system implementor's viewpoint; information systems life cycle; techniques of analysis; data dictionaries and data flow diagrams; computer-oriented system description. (PR: Admission to program)	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
IS 580 Special Topics	1-4 Credit hours	IS 615 System Simulation	3 Credit hours
Occasional offerings of current topics in information systems, providing important supplementary material for participating students.		An introduction to discrete-event computer modeling and simulation. Probability distributions, model verification and validation, input data collection, output analysis. Simulation languages and software. (PR: Programming capability and quantitative skills)	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
IS 581 Special Topics	1-4 Credit hours	IS 618 Computer Appl in Engi & Sci I	3 Credit hours
Occasional offerings of current topics in information systems, providing important supplementary material for participating students.		Computational and algorithmic methods in engineering and science, optimization and numerical analytic techniques including gradient and search methods, linear programming, simulation, and data base mechanics. (PR: Admission to the program)	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
IS 582 Special Topics	1-4 Credit hours	IS 620 Intro to Operating Systems	3 Credit hours
Occasional offerings of current topics in information systems, providing important supplementary material for participating students.		General principles of managing jobs, processes and storage (real, virtual, auxiliary) in multiprogramming operating systems; interconnection and management of processors in multi-processing and distributed computing system configurations; operating systems comparison. (PR: IS 621 and IS 630, or consent)	
Grade Mode: Normal Grading Mode		Pre-req: IS 621 or IS 520G.	
IS 583 Special Topics	1-4 Credit hours	Grade Mode: Normal Grading Mode	
Occasional offerings of current topics in information systems, providing important supplementary material for participating students.		IS 621 Information Structures I	3 Credit hours
Grade Mode: Normal Grading Mode		Representation and manipulation of numeric and non-numeric information, linear lists, strings, multilinked structures; sorting and searching; storage management; data structures in programming language. Relevant aspects of discrete mathematics. (PR: IS 510 or equivalent)	
IS 585 Independent Study	1-4 Credit hours	Grade Mode: Normal Grading Mode	
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.		IS 623 Database Management	3 Credit hours
Grade Mode: Normal Grading Mode		Review of information structures and of relationships among data elements and objects. Relational database theory; design and organization of databases, retrieval structures, and query mechanisms. (Prerequisite: IS 622 or consent)	
IS 586 Independent Study	1-4 Credit hours	Pre-req: IS 621 (may be taken concurrently).	
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.		Concurrent PR: IS 621	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
IS 587 Independent Study	1-4 Credit hours	IS 625 Software Engineering	3 Credit hours
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.		The process of developing complex software products. Includes the software life cycle, methods and tools for life cycle phases. Application of concepts, methods, and tools in a class project.	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
IS 588 Independent Study	1-4 Credit hours		
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.			
Grade Mode: Normal Grading Mode			
IS 600 Management Information Systems	3 Credit hours		
The course examines personal, work group, and enterprise information systems with respect to their value, their components, and the process of developing them.			
Grade Mode: Normal Grading Mode			

- IS 630 Comp Arch & Assembly Lang** **3 Credit hours**
An introduction to the composition and operation of electronic digital computers and to assembly language programming. (PR: IS 510 or equivalent)
Pre-req: IS 510.
Grade Mode: Normal Grading Mode
- IS 631 Information Security** **3 Credit hours**
This course provides foundation knowledge in information security, including protecting information assets, risk mitigation strategies, response to security incidents, and designing secure systems.
Grade Mode: Normal Grading Mode
- IS 635 Computer Graphics** **3 Credit hours**
An introduction to the areas of computer graphics that are necessary to understand, evaluate, and develop graphics applications. (PR: Admission to program)
Pre-req: IS 500.
Grade Mode: Normal Grading Mode
- IS 640 Programming Languages** **3 Credit hours**
Definition of program environment, program sequence and control, subroutines and other secondary sequences; statement structures, parsing, grammars, etc.; classes of programming languages. (PR: IS 622 or consent)
Grade Mode: Normal Grading Mode
- IS 645 Geographic Information Systems** **3 Credit hours**
Covers the elements of GIS hardware, software, data and infrastructure needs. Input data issues; data types, sources, error, preprocessing, manipulation and analysis, GIS tools and applications. (PR: Consent)
Grade Mode: Normal Grading Mode
- IS 646 Computer Sys Security** **3 Credit hours**
This course is designed to provide the technical and analytical skills to implement computer security. Students review how to manage computer security, current security technologies, and incident response.
Grade Mode: Normal Grading Mode
- IS 647 IT Disaster Plan and Recovery** **3 Credit hours**
This course provides the skills necessary to manage IT disaster recovery planning. The course focuses on the protection of information. Students will analyze risk, design a plan, and explore available technologies.
Grade Mode: Normal Grading Mode
- IS 650 Special Topics** **1-4 Credit hours**
Different transmission media, digital communications, telecommunications services, types of networks and topologies, network protocols, components, and applications. (PR IS 521 or TM 660 or Permission)
Grade Mode: Normal Grading Mode
- IS 651 Special Topics** **1-4 Credit hours**
Varies according to interests of students and instructor. (PR: Consent)
Grade Mode: Normal Grading Mode
- IS 652 Special Topics** **1-4 Credit hours**
Varies according to interests of students and instructor. (PR: Consent)
Grade Mode: Normal Grading Mode
- IS 653 Special Topics** **1-4 Credit hours**
Occasional offerings of current topics in information systems, providing important supplementary material for participating students.
Grade Mode: Normal Grading Mode
- IS 655 Multimedia & Elec Dissem** **3 Credit hours**
Components of multimedia, such as data, voice, pictures, animations, and videos, and their production, manipulation, dissemination processes. Technologies, processes, and services for electronic dissemination. Applications and current trends. (TM 660 or permission)
Grade Mode: Normal Grading Mode
- IS 656 Comm & Network Technologies** **3 Credit hours**
Different transmission media, digital communications, telecommunications services, types of networks and topologies, network protocols, components, and applications. (PR: IS 622, or TM 660, or permission)
Grade Mode: Normal Grading Mode
- IS 660 Models of Computation** **3 Credit hours**
Switching algebra and relationship to computers; finite automata; Turing machines; recursion; computability and unsolvability. (PR: IS 622, math maturity)
Grade Mode: Normal Grading Mode
- IS 665 Health Care Enterpr Info Syst** **3 Credit hours**
A hands-on introduction to using a health care enterprise information system providing students opportunity to work with elements of an EIS
Grade Mode: Normal Grading Mode
- IS 670 Lang Translators & Concepts** **3 Credit hours**
Formal language concepts, syntactic analysis; types of translators; detailed review of assemblers, interpreters, and compilers, and techniques of their construction. (PR: IS 622)
Grade Mode: Normal Grading Mode
- IS 680 Social Issues in Info Systems** **3 Credit hours**
Aspects of the interaction of computer systems and society including such topics as system security, respect of privacy, changing job requirements, ergonomics, and moral and ethical considerations. (PR: Completion of core, or consent of instructor)
Grade Mode: Normal Grading Mode
- IS 685 Independent Study** **1-4 Credit hours**
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.
Grade Mode: Normal Grading Mode
- IS 686 Independent Study** **1-4 Credit hours**
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.
Grade Mode: Normal Grading Mode
- IS 687 Independent Study** **1-4 Credit hours**
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.
Grade Mode: Normal Grading Mode
- IS 688 Independent Study** **1-4 Credit hours**
An approved study of special interest, that is appropriate for the student's program of study, concerning information systems. Carried out under the supervision of a faculty member.
Grade Mode: Normal Grading Mode
- IS 690 Prin of Artificial Intelligence** **3 Credit hours**
A survey of the field of artificial intelligence and expert systems. Students will work together designing and implementing a project. (PR: Permission)
Grade Mode: Normal Grading Mode

IS 691 Comprehensive Project 3 Credit hours

Develop expertise in an emerging area of information systems through guided study under faculty mentorship.

Grade Mode: Credit/No Credit Grade Only

IS 692 Image Processing 3 Credit hours

Image Processing focuses on the application of technology to scientific analysis of images. Topics include: measurement techniques, scientific methods of reconstruction and interpretation of images; enhancement of images and video.

Grade Mode: Normal Grading Mode

IS 695 Expert Systems 3 Credit hours

A review of expert systems techniques and applications. Participants will develop small expert systems using several different personal computer expert systems development programs (shells)

Grade Mode: Normal Grading Mode

IS 698 Internship 1-3 Credit hours

Supervised work experience in information systems or related fields.

Attributes: No Textbook Required

Grade Mode: Credit/No Credit Grade Only

IS 699 Final Project 1-6 Credit hours

Grade Mode: Normal Grading Mode