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2009

## Information and Decision Science (INFO)

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## Information and Decision Science

		course schedule book. May be repeated eight times for a maximum of 12 credits as long as the topic is different.
INBS581	Title	International Marketing Management.
	Prerequisites	MKTG 501 or MKTG 561; MBA degree students only.
	Special Fee	Special fee.
	Number and type of credits	1.5 credits lecture.
	Course Description	This course focuses on international marketing environments, functions, strategies and elements of the marketing mix. The course provides tools for identifying, assessing and exploiting international marketing opportunities and dealing with the challenges of marketing in foreign countries. Particular attention is given to the impact of social, cultural, economic, and political/legal forces on international marketing of goods and services. Contemporary issues and trends in international marketing are examined.
INFO101	Title	Contemporary Business.
	Prerequisites	Can not be used for degree credit by Business Administration majors with more than 60 credits completed toward degree.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	The organization and operation of contemporary business are explored. Students study the operation of the free enterprise system, alternative economic systems, and the various functional areas of business: finance, management, production, and marketing.
INFO173	Title	Spreadsheet Modeling for Business Decisions.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course will emphasize analysis and solutions to contemporary business problems through the use of current version of Microsoft Excel. Recognizing
INFO173	Course Description	that the business world is technology-driven, affecting people both professionally and personally, extensive knowledge of application-based software is essential as the language of business. Students will be introduced to business decision modeling processes to strengthen their logical and analytical skills. Strong emphasis of the course will be to use Excel as

the basis for managerial decision support through the analysis of contemporary business case problems. Students will apply the appropriate functions and features of Excel to solve business cases. The course will also emphasize oral presentation and written reports on business processes used in case solutions in order to further strengthen students' communication skills. Starting Summer 2016: This course emphasizes the development of Microsoft Excel skills and applications. In addition to basic skill building strong emphasis will be placed on business problem analysis and solution development through spreadsheet modeling. Students will also develop skill in presenting models in visual, written, and oral form.

INFO209 Title  
Special Fee  
Number and type of credits  
Course Description

Personal Finance.  
Special fee.  
3 hours lecture.

This course introduces students to the principles of personal financial management. Using a life cycle view of the role(s) of money at various stages of life, students discover principles underlying decisions such as how to budget, managing consumer credit, managing taxes, selecting investments, planning for retirement, and estate planning.

INFO230 Title  
Prerequisites

Introduction to Business Co-Op Work Exp.  
Sophomore level status (45+ semester hours completed) with a 2.25 minimum grade point average. Major within School of Business. Starting Fall 2016: Sophomore level status (45+ semester hours completed) with a 2.25 minimum grade point average; Business Administration major.

Special Fee  
Course Description

Special fee.  
This is an introductory cooperative education course which integrates formal classroom study and assignments with a supervised full-time or part-time off-campus employment experience. The purpose of this course is to develop self-awareness and to explore educational and occupational alternatives.

INFO240 Title  
Prerequisites  
Special Fee  
Number and type of credits  
Course Description

Statistical Methods in Business.  
MATH 100 or Placement Through MSU Placement Test.  
Special fee.  
3 hours lecture.

This course is a comprehensive introduction to the application of modern statistical methods used in enumerative and analytic studies in business.

		Topics covered include: use of percentages, proportions, rates, ratios and indices; descriptive statistical methods of data analysis; probability; an introduction to discrete and continuous probability distributions; the normal distribution; classical statistical inference - sampling distributions, confidence interval estimation and hypothesis testing for the mean and the proportion and for differences in two means and differences in two proportions; an introduction to control charts. Spreadsheet software is integrated in all topics.
INFO271	Title	Managerial Statistics.
	Prerequisites	Math 113 and 114. Major within School of Business. Starting Fall 2016: MATH 113 and MATH 114; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Analytic statistics which focuses on tools and methods for improving quality. Topics include Demings's fourteen points, descriptive statistics, summary statistical measures, probability and probability distributions, control
INFO271	Course Description	charts, regression and design of experiments.
INFO290	Title	Technology in Business.
	Prerequisites	INFO 173.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course provides an introduction to the impacts of information systems on business. The course focuses on business processes and information needs in organizations, the roles of information systems in addressing these needs, and ultimately, providing support for the tactical and strategic directions of the business. The building blocks of information systems (hardware, software, networking, Internet, cloud computing, systems analysis, security, e-business, database systems, enterprise systems, etc.) are presented with an emphasis on how each of these components impacts business processes.
INFO300	Title	Integrated Core: Operations Management.
	Prerequisites	BUGN 295. Business Administration majors only.
	Corequisites	FINC 300, MKTG 300 and MGMT 300.

	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course is an intro to managerial concepts & quantitative tools required in the design, operation, and control of processes & systems needed to deliver a product or service in a business. Clearly, this material must be integrated with all of the other functional areas of an organization. In addition to examining the operational concepts, theories and tools, the course will include discussions of the interrelationships of these topics and their usefulness in the areas of marketing, management, finance & business strategy. The course will present methods that ensure that business operations are efficient in using as few resources as needed, & effective in meeting customer requirements. Focus will be on managing the processes that convert inputs (in the forms of materials, labor, and energy) into outputs (in the form of goods and/or services). This course incorporates mathematical, statistical, & decision making methods in the analysis of specific business processes & systems. The topics covered include operations strategy, process optimization & management, inventory control, production planning & scheduling, queuing, supply chain management, quality control, decision making, & project management. Computers are used to solve problems involving complex systems. 1 of 4 courses within the Integrated Semester of the undergraduate program.
INFO301	Title	Business Decision Making.
	Prerequisites	INFO 173 or CMPT 109; and MATH 106 or 109 or 114 or 116 or 122 or 221; or departmental approval. For Business minors only.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	The underlying theme of the course is business problem solving. This course engages students in employing tools from operations management and management information systems in the solution of business problems. Analysis of quantitative decision-making and information systems from the management point of view will be covered.
INFO306	Title	Introduction to Web Development.
	Prerequisites	INFO 310; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.

	Course Description	This course is designed to increase awareness and understanding of the movement to Web-based applications and enterprise-level management information systems as well as electronic commerce. This is a hands-on, lab-based Web page design course with significant exposure to the tools and requirements for the production of such systems. Students will learn to use a variety of
INFO306	Course Description	development tools such as MS-Front Page, scripting languages such as JavaScript, VBScript and Perl and programming styles to develop both individually and in teams applications that simulate the realities of today's information systems and environment.
INFO310	Title	Database Management Systems.
	Prerequisites	INFO 290. Major within School of Business. Starting Fall 2016: INFO 290; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course provides students an overview of the development, applications and management of database systems in business. Students are given a series of hands-on exercises and projects to practice skills in data analysis, database design, database queries and applications. This course also introduces concepts of database administration and Web based database applications. Previous course INFO 410 effective through Summer 2014.
INFO315	Title	Production and Industrial Analysis.
	Prerequisites	INFO 240 or INFO 271 and MGMT 231; Business Administration majors.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course is mainly designed to expose students to production aspects of industries. It will develop theories and applications in the areas of location of facilities, capacity planning, facilities design and layout, designing assembly line production systems, facilities maintenance and materials handling, purchasing, inventory control systems, forecasting demand for products, master scheduling and MRP, scheduling and control systems, and quality and statistical quality control.
INFO320	Title	Administrative Business Communications.

	Prerequisites	Business Administration majors only; and MKTG 240.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	The study of communication processes using special problem applications with a theoretical and practical base. Writing proposals, business correspondence, business plans, and handling electronic messaging are covered. Emphasis is also on using presentation materials to complement interpersonal and organizational communication. This course counts as an elective within the business major for all concentrations in Business Administration. Meets the University Writing Requirement for majors in Business Administration with a Concentration in Management Information Systems or Operations Management.
INFO321	Title	Information and Media Management.
	Prerequisites	Business Administration majors only; and INFO 290.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Includes study of the criteria and methods by which records are created, stored, retrieved, retained and disposed, as well as attention to study of the managerial considerations necessary for effective selection and utilization of equipment, procedures, and personnel. This course counts as an elective within the business major for all concentrations in Business Administration.
INFO335	Title	Computer Applications in Business.
	Prerequisites	INFO 173 or passing SBUS Computer Proficiency Exam; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	A course designed to prepare students to make decisions in the selection and utilization of microcomputer systems and appropriate software for a business environment based on identified needs; the factors to consider in the
INFO335	Course Description	implementation of microcomputers at different levels of an organization; and the characteristics of specific software applications used in the business environment. The course also provides students with hands-on experience with commercial software packages. This course counts as an elective within the

INFO342	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>business major for all concentrations in Business Administration.</p> <p>Information Technology Infrastructure.</p> <p>INFO 290. Major within School of Business. Starting Fall 2016: INFO 290; Business Administration major.</p> <p>Special fee.</p> <p>3 hours lecture.</p> <p>This course is a survey of the many and varied hardware, software, service, and human resources that comprise the core of the information technology organization in the enterprise. The major resources are explained and their chief characteristics elaborated. Emphasis throughout the course is placed on the enterprise requirements for IT infrastructure and how each of these resources addresses each requirement. The infrastructure components are presented through the life cycle of resources: planning, selection, acquisition, implementation, operation, evaluation, and refresh. Previous course INFO 282 effective through Summer 2014.</p>
INFO350	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Quality Improvement.</p> <p>INFO 240 or INFO 271; Business Administration majors.</p> <p>Special fee.</p> <p>3 hours lecture.</p> <p>A comprehensive approach to quality in organizations is essential to maintaining competitive position. This course explores current thinking as well as the tools and techniques necessary to implement quality programs.</p>
INFO351	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Fundamentals of Project Management.</p> <p>INFO 290. Major within School of Business. Starting Fall 2016: INFO 290; Business Administration major.</p> <p>Special fee.</p> <p>3 hours lecture.</p> <p>This course provides an overview of the tools, techniques, and methods used to manage business problems. The entire project life cycle-planning, implementation, control, and evaluation is addressed. Students are required to take the CAPM exam.</p>
INFO357	<p>Title</p> <p>Prerequisites</p>	<p>Business Computer Programming.</p> <p>INFO 342; major within School of Business, Information Technology. Starting Fall 2016: INFO 342; Business Administration major, Information Technology.</p>



	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course enhances students' ability to use computer programming to solve business problems. Students are introduced to the concepts of object-oriented programming in business applications.
INFO360	Title	MIS Co-Op.
	Prerequisites	INFO 351 and; INFO 310 or INFO 342. Major within School of Business. Starting Fall 2016: INFO 351 and; INFO 310 or INFO 342; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours cooperative education.
	Course Description	This is an introductory cooperative education course for students studying Management Information Systems. This course will integrate formal classroom study with a supervised full-time, or part-time off-campus employment experience. The purpose of this course is to develop self-awareness and to explore educational and occupational alternatives.
INFO361	Title	Information Technology Special Projects.
INFO361	Prerequisites	INFO 351 and; INFO 310 or INFO 342. Major within School of Business. Starting Fall 2016: INFO 351 and; INFO 310 or INFO 342; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course provides students with the ability to use their accumulated information systems technology skills and knowledge to complete a real world project. These projects will be identified by the school or department and must include a major information systems component with an external organization.
INFO365	Title	Foundations of Business Analytics.
	Prerequisites	INFO 240.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This is the first course in the business analytics concentration and provides

a comprehensive overview of the fundamental concepts and tools of business analytics for improving business decision making and organization performance. The major topics discussed are: (i) the process of business intelligence and business analytics, (ii) the core concepts of "big data" management, (iii) the principles of data visualization and dashboard design, and (iv) the techniques of predictive analytics. Spreadsheet or commercial software is integrated in all topics.

INFO366 Title  
Prerequisites  
Special Fee  
Number and type of credits  
Course Description

Managing Big Data.  
INFO 310 and INFO 365.  
Special fee.  
3 hours lecture.

This course focuses on the management of "big data," the term given to the huge amounts of data that are routinely captured today as byproducts of business operations, transactions, and interactions on social networks. This data is warehoused in various forms in various databases, and designing the process by which data is extracted, transformed, and presented for analysis is key to successful and efficient analysis. Infrastructure choices including cloud computing, ELT vs ETL, and choice of language for distributed processing (Hadoop vs ECL/HPCC etc.) are discussed.

INFO367 Title  
Prerequisites  
Special Fee  
Number and type of credits  
Course Description

Structured Data Analytics.  
INFO 365; and INFO 366 may be taken as prerequisite or corequisite.  
Special fee.  
3 hours lecture.

This is the first of two courses focusing on the techniques of data analytics. In this course students are introduced to analytical techniques for business decision making that are suitable for structured data. Training data, validation data, and out-of-sample validation data for model development and validation are discussed. Popular data mining techniques like decision trees, neural networks, and cluster detection are introduced. Students will use datamining software to analyze realistically large datasets to gain experience with these techniques.

INFO368 Title  
Prerequisites  
Special Fee

Unstructured Data Analytics.  
INFO 367.  
Special fee.

	Number and type of credits	3 hours lecture.
	Course Description	This is the second of two courses focusing on the techniques of data analytics. In this course students are introduced to analytical techniques for business decision making that are suitable for unstructured data (text, video, audio, etc.). Training data, validation data, and out-of-sample validation data for model development and validation are discussed. The focus
INFO368	Course Description	of the analytical techniques is on text-mining, but related issues like natural language processing, context analysis, and situational awareness are also discussed. Students will use appropriate data-mining software to analyze realistically large datasets to gain experience with these techniques.
INFO372	Title	Management Science.
	Prerequisites	INFO 240, INFO 375 and MGMT 231; Business Administration majors.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Applied mathematical techniques used to solve a wide variety of problems with special attention to issues, management, and production control. Topics include linear programming, transportation, and assignment algorithms, other optimization techniques, decision theory, simulation, and queuing theory.
INFO375	Title	Operations Analysis.
	Prerequisites	INFO 240 or INFO 271; Business Administration majors.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	An introduction to managerial concepts and quantitative tools required in the design, operation, and control of business systems. This course incorporates mathematical and statistical methods in the analysis of specific business systems and industrial production activities, inventory control, production planning and scheduling, and capital management. Computers are used to solve problems involving complex systems.
INFO380	Title	Computer Networks in Business.
	Prerequisites	INFO 342 or departmental approval. Major within School of Business. Starting Fall 2016: INFO 342; departmental approval; Business Administration major.
	Special Fee	Special fee.

	Number and type of credits	3 hours lecture.
	Course Description	This course enhances students' knowledge of data communications, network design, administrations, and distributed information systems. The concepts essential to the design and application of both communication hardware and software are examined. Emphasis is on the analysis and design of networking applications in business. Management of networks, networking security, cost-benefit analysis, introduction of major emerging networking technologies, and evaluation of connectivity options are also covered.
INFO386	Title	Supply Chain Management.
	Prerequisites	INFO 375; Business Administration majors.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course involves the flow of materials and information among all of the firms that contribute value to a product from the source of raw materials to end customers. Relationships among supply chain components and the interface of supply chain activities and other functional areas of business are examined.
INFO400	Title	Business Analytics Capstone Practicum.
	Prerequisites	INFO 368 may be taken as prerequisite or corequisite.
	Special Fee	Special fee.
	Course Description	This is the final requirement of the business analytics curriculum. In this capstone practicum students will work on a collaborative group project that addresses, ideally, a live business problem using the analytical techniques learned in the other courses comprising this major. Students will clearly articulate the business problem and the goals of their chosen analytical approach. They will have access to realistically big data, and an opportunity to appreciate, through application, the possibilities and limitations of these analytical techniques. Students will be expected to understand and communicate the business implications of their analysis to interested
INFO400	Course Description	stakeholders.
INFO412	Title	Management for Information Systems Continuity.
	Prerequisites	INFO 290. Major within School of Business. Starting Fall 2016: INFO 290;

	Special Fee	Business Administration major. Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course provides the knowledge and skills required to complete an in-depth analysis of an organization's information systems and infrastructure needs from planning, control, and strategy to the role of security protection, disaster recovery, and business continuity with reliability engineering, performance management, storage-networking and facility design. In addition to the technical and logistical aspects, the course provides an important framework of the management perspective necessary to plan for and successfully react to operational vulnerability and disruptions in public and private organizations.
INFO416	Title	Business Process Analysis and Enterprise Systems.
	Prerequisites	INFO 342. Major within School of Business. Starting Fall 2016: INFO 342; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course provides an in-depth exploration of the design, development, use, control, and maintenance of business processes. Emphasis is placed on the impacts of processes on the effectiveness and efficiency of business operations through business process engineering. Enterprise Resource Planning systems (ERP) are analyzed as attempts to integrate a consistent set of process across an organization.
INFO440	Title	Data Analysis and Visualization.
	Prerequisites	BUGN 280 and INFO 310. Major within School of Business. Starting Fall 2016: BUGN 280 and INFO 310; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course is a comprehensive introduction to the fundamental concepts and tools needed for participating in the developing discipline/field of business analytics which is aimed at improving business decision making and organization performance. The use of data warehouses to support business analytics is discussed and four core topics of business analytics are covered: (1) Data visualization through dashboard design; (2) Descriptive and

		inferential methods of data analysis; (3) Big data modeling, and (4) Methods of optimization. The core of business analytics will be developed from three perspectives - descriptive analytics, predictive analytics and prescriptive analytics. Spreadsheet or commercial software is integrated in all topics.
INFO463	Title	Essential Research and Data Analysis Methods.
	Prerequisites	INFO 240 and INFO 173 or permission of department; Business Administration majors.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Provides a working knowledge of research methodology and includes the fundamentals of both exploratory and confirmatory data analysis useful in business research settings, enabling a focus on understanding and interpreting results and being aware of related ethical issues. Develops the concepts of experimental designs and model building and uses SPSS, a menu-driven statistical software package, throughout. Enhances development of interpersonal skills through the use of projects and assignments emphasizing the importance of teamwork in achieving success in an organizational setting and enhances development of communication skills by emphasizing term team
INFO463	Course Description	project reports and brief oral presentations.
INFO470	Title	Electronic Commerce: Creating Business Value Using Information Technology.
	Prerequisites	INFO 290. Major within the School of Business and Information Technology (INFT) majors only.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course is designed to provide the student an understanding of the consequences of the introduction of the Internet and the World Wide Web in the way business is conducted. The electronic commerce world is viewed primarily from the point-of-view of MIS. That is, the managerial issues related to the information infrastructure requirements are mainly attended to. Both individuals and organizations have been profoundly affected by related network technologies that have since permutated in form ever since the convergence of advanced communications and information infrastructure and the cable,

telephone, television, and telecommunications industries. The student will learn about new forms of business practices in business-to-business, consumer-to-business, and intraorganizational transactions. Specifically, activities in the areas of electronic shopping, publishing, distribution, and collaboration will be explored. The following issues that have arisen as a result of electronic commerce (EC) will be explored: security, authentication, privacy, data encryption, intellectual property rights, freedom of expression using electronic media, fair use policies, legal liabilities, etc. Students will also learn about new organizational forms such as the "virtual" firm that are emerging as a result of EC.

INFO474	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Business Forecasting.</p> <p>INFO 240 or INFO 271; Business Administration majors.</p> <p>Special fee.</p> <p>3 hours lecture.</p> <p>Mathematical and econometric models for short- and long-range business forecasting. Models are evaluated for accuracy and relevance. The computer is used as a tool in developing an automated system.</p>
INFO475	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Quantitative Decision Making for Business.</p> <p>INFO 372 and INFO 463; Business Administration majors.</p> <p>Special fee.</p> <p>3 hours lecture.</p> <p>This course is a capstone course for the Quantitative Methods concentrations and is aimed at applying the quantitative methods learned in the prerequisite courses to solve some real world business problems. It will be a project-oriented course. The class time will be used to discuss the problems and their solution strategies rather than learning more techniques. Computerized tools will be used to solve the problems.</p>
INFO476	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Data Mining for Business.</p> <p>INFO 240 or departmental approval. Major within School of Business. Starting Fall 2016: INFO 240 or departmental approval; Business Administration major.</p> <p>Special fee.</p> <p>3 hours lecture.</p> <p>This course is concerned with data mining concepts and techniques and is designed as a practical introduction to the growing field of Data Mining.</p>

		This powerful set of analytic techniques is becoming increasingly popular as an information management tool designed to guide decisions under conditions of limited certainty across such diverse fields as marketing, finance, economics, education, epidemiology, psychology, sociology, as well as many others.
INFO488	Title	Business Application with Artificial Intelligent (AI) Systems.
	Prerequisites	INFO 290; Business Administration major.
	Special Fee	Special fee.
INFO488	Number and type of credits	3 hours lecture.
	Course Description	The course will cover the following topics: knowledge acquisition techniques, knowledge representation, inferencing, case-based reasoning, industrial application, uncertainty issues.
INFO490	Title	Decision Support Systems for Business.
	Prerequisites	INFO 290; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	The course will cover the following topics: decision types and models, heuristics in decision making, the role of data and its collection, group decision making, design of DSS and GDSS, neural computing/learning, uncertainty issues.
INFO491	Title	Independent Study in Information Systems.
	Prerequisites	Departmental approval; and INFO 290. Major within School of Business. Starting Fall 2016: INFO 290; Departmental approval; and INFO 290; Business Administration major.
	Special Fee	Special fee.
	Course Description	A student, under the guidance of a faculty advisor, will conduct an in-depth study on a current topic in information systems. A project report or a research paper will be produced after this study. May be repeated once for a maximum of 6.0 credits as long as the topic is different.
INFO492	Title	Special Topics in Information Systems.
	Prerequisites	INFO 290 and departmental approval. Major within School of Business. Starting Fall 2016: INFO 290 and departmental approval; Business Administration major.



	Special Fee	Special fee.
	Course Description	This course covers the topics in the design, implementation, and applications of information systems. The topics also include various information technologies and their applications. The course may be repeated for credit as long as the "special topic" in each course differs from topics previously taken. May be repeated once for a maximum of 6.0 credits as long as the topic is different.
INFO496	Title	Advanced Systems Analysis and Design.
	Prerequisites	INFO 351 and INFO 416 and INFO 440. Major within School of Business. Starting Fall 2016: INFO 351 and INFO 416 and INFO 440; Business Administration major.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course is an advanced (capstone) project-oriented exposition of the MIS knowledge to application system development process. Emphasis is placed on information analysis and the logical specification of the system and project management. SDLC, systems development process and systems development tools, etc., are covered. The student is guided to develop a formal design document as a project.
INFO501	Title	Statistical Methods.
	Prerequisites	Course in undergraduate calculus; M.B.A. degree students only.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Introduction to statistical techniques with applications in business decision making and problem solving. Topics include methods of descriptive data analysis, probability and probability distributions, methods of inferential data analysis including estimation and hypothesis testing and an introduction to experimental design principles, correlation, regression model building and an introduction to time series forecasting.
INFO502	Title	Operations Research.
INFO502	Prerequisites	INFO 501.
	Special Fee	Special fee.

	Number and type of credits	3 hours lecture.
	Course Description	A presentation of many of the applied mathematical techniques used to help make business decisions. Topics include the theory of decisions, linear programming, network analysis, queuing, Markov processes, and simulation.
INFO503	Title	Information Systems.
	Prerequisites	M.B.A. degree students only.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Examines the information requirements of an organization. The differences in the kinds of information needed at the various organizational levels (operational, administrative and strategic) are emphasized. How to plan and implement a comprehensive information system is discussed as well as methods to measure its effectiveness.
INFO505	Title	Production/Operations Management.
	Prerequisites	INFO 501, 503, MGMT 505; M.B.A. degree students only.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	Emphasizes human and mechanical productivity in planning a comprehensive and effective production or operations system. Employs a case approach to the study, formulation, and solution of business problems through the application of managerial, quantitative and information systems methodology.
INFO530	Title	Introduction to Business Statistics.
	Special Fee	Special Fee.
	Number and type of credits	1.5 hours lecture.
	Course Description	This course is a comprehensive introduction to statistical techniques with applications in business decision making and problem solving used in enumerative studies. Topics include methods of descriptive data analysis with emphasis on understanding and managing variation and an introduction to methods of inferential data analysis. Spreadsheet software is integrated in all topics.
INFO531	Title	Business Models.
	Prerequisites	INFO 501.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.

	Course Description	This is an advanced course in quantitative approaches to managerial decision making. The emphasis will be on simulation models and techniques with applications in finance, production, inventory, and queuing analysis. Computer-based simulation systems will be discussed and tested on the computer.
INFO532	Title	Statistical Inference for Business.
	Prerequisites	INFO 501.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	An exploration of intermediate statistical methodologies used for decision making. The theoretical bases for various techniques are presented to create a framework for understanding the assumptions and limitations of inferences made from data. Topics covered will include multivariate probability functions, moment generating functions, sampling distributions; estimation, Neyman-Pearson Lemma, parametric and non-parametric hypothesis tests, and analysis of variance.
INFO533	Title	Stochastic Models.
	Prerequisites	INFO 502.
	Special Fee	Special fee.
INFO533	Number and type of credits	3 hours lecture.
	Course Description	Stochastic models are descriptions of systems which change in accordance with probabilistic laws. The course focuses on construction rather than solution of models. Simulation solutions and statistical analysis of data from stochastic processes. Applications to business problems are stressed.
INFO534	Title	Multivariate Analysis.
	Prerequisites	INFO 502, 532.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	An introduction to multivariate analysis with an emphasis on the practical application of these techniques. After introducing the multivariate distribution, the following statistical procedures are explored: multiple regression, discriminant analysis, multivariate tests of significance,

INFO535	Title	canonical analysis, factor analysis, and multidimensional scaling. Use of these procedures as managerial tools is fully explored.
	Prerequisites	Advanced Information Systems.
	Special Fee	INFO 503.
	Number and type of credits	Special fee.
	Course Description	3 hours lecture.
		Conceptual foundations of information systems including the nature of information, the impact of information systems of the organization and managing the information services function. Explores most current technology in the area of operating systems software, including multiprocessing, multiprogramming, virtual storage and other operating systems, as well as applications software systems.
INFO550	Title	Total Quality Methods.
	Prerequisites	INFO 501.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	The philosophy, tools and techniques necessary to properly manage for the control of quality production are of ever increasing importance to business and industry. Quality control, long thought of as only a tool for acceptance sampling, is now expanded and used as a means for improving all phases of any business system. For several decades, Japanese business has successfully utilized these methods to gain new inroads into international markets. This course presents the newest approaches to quality control adapting many of the traditional tools and methods to current problems.
INFO561	Title	Applied Business Statistics.
	Prerequisites	INFO 530.
	Special Fee	Special fee.
	Number and type of credits	1.5 hours lecture.
	Course Description	This course focuses on the development and application of mathematical models and statistical tools to support managerial decision making. The course emphasizes "learning by doing" so that students will be expected to formulate, solve, and interpret a number of different mathematical models and statistical applications. The emphasis is on data-driven decision making applied to diverse industries and functional areas, including accounting, finance,

management, operations and marketing. Applications to problems in auditing, advertising, consumer behavior, human resources management, product packaging and planning, portfolio optimization, public health planning, real estate and risk management are shown. Spreadsheets and other software tools are used to solve and analyze the models developed.

INFO562	Title	Management Science in Business.
	Prerequisites	INFO 561.
	Special Fee	Special fee.

INFO562	Number and type of credits	1.5 hours lecture.
	Course Description	This course focuses on the development and application of various mathematical models used to support managerial decision making. The course employs a case approach to the study, formulation, and solution of business problems through application of managerial, quantitative and information systems methodology. Mathematical programming models, decision-making Bayesian analysis, simulation models, and queuing applications are stressed.

INFO563	Title	Strategic Information Systems.
	Special Fee	Special fee.
	Number and type of credits	3 hours lecture.
	Course Description	This course provides students with a fundamental understanding of strategic roles that information technology and information systems (IT/IS) play in providing the tools and resources for managing business operations. It surveys a wide range of IT/IS topics analytically, including IT governance, system development, information resource management and business intelligence, IT/IS impact on business models and decision making, implications of emerging technologies to E-business, security issues and ethical issues in deployment of IT/IS. The course addresses these topics through a managerial, applications-oriented perspective. It emphasizes on aligning IT/IS strategically to goals of business to gain competitive advantages.

INFO564	Title	Operations and Supply Change Management.
	Prerequisites	INFO 561.
	Special Fee	Special fee.
	Number and type of credits	1.5 hours lecture.

	Course Description	This course provides students with a fundamental understanding of manufacturing and service operations and their role in the organization and in the supply chain. Surveys a wide range of operations and supply chain management topics, including process flow analysis, capacity planning, inventory management, facilities location, and total quality management. The course deals with these topics through a managerial, applications-oriented perspective. The course is integrative in nature, emphasizing the fit and relationship of operations with other functions of the firm.
INFO571	Title	Discovering and Leveraging Emerging Technologies.
	Prerequisites	INFO 563 or INFO 503. MBA degree students only.
	Special Fee	Special fee.
	Number and type of credits	1.5 hours lecture.
	Course Description	Technological innovation are a primary source of competitive advantage for firms and impact the way we live and work. Over the past few decades we have seen various technologies revolutionize the business world - from the introduction of the personal computer, to the Internet revolution, and more recently mobile computing and hybrid cars. These revolutions are obvious in hindsight, but it often difficult to determine which technologies will take off and become successful and which have the potential to completely change industries. This course will examine the current state of the high technology field and introduce various methods and frameworks, in order to help determine which technologies are likely to succeed, which will probably fail, and which may lead to radical changes in the business world and in our everyday lives.
INFO572	Title	Business Analysis.
	Prerequisites	INFO 563 or MGMT 565 or by permission of the MBA Office. MBA degree students only.
	Special Fee	Special fee.
	Number and type of credits	1.5 hours lecture.
	Course Description	The focus of this course is on how to convert the business needs of a customer into the systems requirements that can be further taken into the design and implementation phases in the development cycle of a software system.
INFO572	Course Description	Conducting a feasibility analysis (business case) for the proposed information

systems or enhancements to an existing information system is the essential part of this course. This is done with the help of tools and techniques of systems analysis. Current Systems Analysis methodologies such as SDLC and Agile will be covered. Change management concepts, processes, and techniques are presented in the context of systems development projects. Pointers to managerial and organizational aspects of information technology projects are provided throughout the course. This course is for individuals aspiring to be analysts or better informed end users of information systems in business.

INFO573	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Practicum in E-Commerce.</p> <p>INFO 563 or INFO 503; MBA degree students only.</p> <p>Special fee.</p> <p>1.5 hours lecture.</p> <p>This course is designed to provide the student a practical understanding of the consequences of the introduction of the Internet and the World Wide Web in the way business is conducted. The aim of the course is to provide a hand on understanding of how to establish and run an online business. Students will learn about the importance of Web-based commerce by participating in it. The course will address issues such as online market research, building an effective Web presence, search engine marketing, and leveraging the use of other current techniques to drive traffic to a Website.</p>
INFO574	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Number and type of credits</p> <p>Course Description</p>	<p>Business Database Development.</p> <p>INFO 563 or INFO 503; MBA degree students only.</p> <p>Special fee.</p> <p>1.5 hours lecture.</p> <p>This is an introductory course of databases development and deployment in business. It offers students with both theoretical background and hands-on experiences in database design and applications. Students are also introduced with concepts of database management, trends and issues of database applications in business.</p>
INFO575	<p>Title</p> <p>Prerequisites</p> <p>Special Fee</p> <p>Course Description</p>	<p>Independent Study in Information Systems for Business.</p> <p>Departmental approval. MBA degree students only.</p> <p>Special fee.</p> <p>Under faculty guidance and supervision, this tutorial course is open to students who wish to pursue individual study and research in a particular</p>

		discipline. May be repeated once for a maximum of 6.0 credits as long as the topic is different.
INFO577	Title	Selected Topics in Information Systems for Business.
	Prerequisites	Departmental approval. MBA degree students only.
	Special Fee	Special fee.
	Number and type of credits	1 - 3 hours lecture.
	Course Description	An in-depth study of a selected topic, issue, problem or trend in information systems for business. The specific subject matter is not offered as an existing regular course or deserves more time-emphasis than is possible in a regular course. When offered, topics and prerequisites are announced in the course schedule book. May be repeated eight times for a maximum of 12 credits as long as the topic is different.
INTL100	Title	Introduction to Global Issues.
	Number and type of credits	3 hours lecture.
	Course Description	This course is designed to offer students an opportunity to study, in a cross-cultural context, a number of topics which are of a global nature and affect humanity in profound ways and which may influence the evolution of world trends. This course is taught by an interdisciplinary faculty team.
INTL400	Title	Integrative Seminar in International Studies.
	Prerequisites	Program director's approval.
INTL400	Number and type of credits	3 hours seminar.
	Course Description	Directed research and preparation of seminar reports and written papers on topics which utilize comparative as well as interrelated approaches to international and global issues and themes.
INTL401	Title	Study Abroad.
	Prerequisites	Study Abroad advisor's approval.
	Course Description	Actual courses of instruction are those offered by institutions taking part in Montclair State's study abroad or student exchange programs. This course will be recorded as NC (No credit). Students participating in the program will select, in advance, the courses by consulting with the Study Abroad Advisor, their academic advisors, and the coordinator of the overseas program at the host institution.