

**5420. Research Seminar in Local History.** 3 hours. Research and writing of local history.

**5460. Archives and Manuscript Repositories Studies.** 3 hours. Examines the theory and role of archives and manuscript repositories, their history and basic practices used in each.

**5470. Museum Studies.** 3 hours. Examines the theory and role of museums in history and basic practices used in them.

**5480. Applied History Practicum.** 3 hours. Practical experience in collecting, evaluating, preparing, describing and displaying archives, manuscripts and artifacts that involve either archives or museums. Includes working experience in either an archive, manuscript repository or museum. Prerequisite(s): HIST 5460 or 5470.

**5500. Techniques of Oral History.** 3 hours. Training in methodology of conducting, editing, transcribing and indexing interviews with eyewitnesses to or participants in historic events; emphasis on archival functions.

**5520. Oral History: Project Development and Implementation.** 3 hours. (0;0;3) A detailed, advanced consideration of the planning and development of an oral history project. Purpose is to create sources of research information to be used writing the master's thesis. Prerequisite(s): HIST 5500. May be repeated for credit.

**5900-5910. Special Problems.** 1–3 hours each. Conference courses open to advanced students capable of doing independent research under the direction of the instructor. Registration permitted only with consent of department.

**5940. Historical Bibliography.** 1 hour. An introduction to major reference materials in American and European history with discussions of significant research centers. Required for all beginning graduate students unless waived by the department chair or graduate committee chair.

**5950. Master's Thesis.** 3 or 6 hours. To be scheduled only with consent of department. 6 hours credit required. No credit assigned until thesis has been completed and filed with the graduate dean. Continuous enrollment required once work on thesis has begun. May be repeated for credit.

**5960-5970. History Institute.** 1–6 hours each. For students accepted by the university as participants in special institute courses. May be repeated for credit as topics vary but not to exceed a total of 6 hours in each course.

**5980. Teaching of College History.** 1 hour. An examination of the philosophies and techniques of teaching history at the college and university level. Open to all graduate students and required of all history teaching fellows at their first opportunity to take it. This course is in addition to other degree requirements.

**6000. Historiography.** 3 hours. United States and European historiography. A history of United States and European historical literature. Required of all PhD students in history.

**6900-6910. Special Problems.** 1–3 hours each. Research by doctoral students in the fields of special interest. Prerequisite(s): consent of department.

**6940. Individual Research.** 3 hours. Doctoral research of an independent nature. May be repeated for credit.

**6950. Doctoral Dissertation.** 3, 6 or 9 hours. To be scheduled only with consent of department. 12 hours credit required. No credit assigned until dissertation has been completed and filed with the graduate dean. Doctoral students must

maintain continuous enrollment in this course subsequent to passing qualifying examination for admission to candidacy. May be repeated for credit.

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## Honors Courses

see *Undergraduate Catalog*

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## Human Service Management and Leadership

see *Undergraduate Catalog*

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## Information Science

see Library and Information Sciences

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## Information Technology and Decision Sciences

### ***Business Computer Information Systems, BCIS***

**5090. Introduction to Business Computer Information Systems.** 1.5 hours. Examines the interaction between information systems and the organizational context. Specific topics to be covered include the strategic role of information systems (IS), interorganizational systems, the Internet and WWW, electronic commerce, reengineering, the human impacts of IS, the management of change, IS development and implementation, and emerging types of information technology. Course work includes lectures, readings, case analyses and discussion, electronic meeting technology, hands-on computer assignments and a team field project.

**5100. E-Commerce Systems Technologies.** 3 hours. Tools, skills, and understanding of the key technologies used in e-commerce, from basic systems design and networking to web site content-management technologies. Prerequisite(s): BCIS 5090 or equivalent, or consent of department.

**5105. E-Business Site Construction.** 1.5 hours. Introduction to the technologies of electronic business web site design. Topics include the principles of web design, use of animation and sound, and the creation of database-driven sites. Prerequisite(s): BCIS 5100 or consent of department.

**5110. Structure of Programming Languages.** 3 hours. Introduces graduate students to new approaches in programming business applications. Makes use of visual programming tools such as VB.NET as well as traditional programming tools such as JAVA. Problem-solving techniques and structured programming are covered early and used throughout the course. Prerequisite(s): BCIS 5090 or equivalent or consent of department.

**5120. Information Systems Development.** 3 hours. The foundations of business information systems analysis and design. Concentration on contemporary design methodologies and computer-aided software engineering techniques. Topics include strategic information systems planning, requirements analysis, user interface design, data design, process design, system testing, ethics and system audit ability, control and security. Prerequisite(s): BCIS 5090 or equivalent, or consent of department.

**5130. Fundamentals of Presentation Design.** 3 hours.

Focuses on the concepts, design and delivery of business presentations in today's challenging business environments. Develops techniques for defining target audiences and meeting their demands, especially senior executive demands. Address issues of written, oral and electronic presentation to these target audiences. Applies the elements and principles of aesthetic design, as well as basics of color theory and its application, to presentations. Requires students to develop an appreciation for both functional and aesthetic design. Prerequisite(s): BCIS 5090 or consent of department.

**5420. Foundations of Database Management Systems.**

3 hours. An introduction to database and database management systems technology within the framework of a business environment. Topics include the study of analysis, design, development and implementation of database-oriented file organizations in business applications. Prerequisite(s): BCIS 5120 or equivalent, or consent of department.

**5600. Visual Information Technologies.** 3 hours. The role of visual information systems in organizations. Alternative taxonomies of information systems, in particular, modes of processing. Human-machine information and data access systems. Prerequisite(s): BCIS 5110 or equivalent, or consent of department.

**5610. Executive and Decision Support Technologies.**

3 hours. An analysis of how computer systems can assist executive decision making and improve productivity. Emphasis is placed on the design, construction, utilization and managerial impacts of executive support systems. Prerequisite(s): BCIS 5120 or consent of department.

**5620. Networking and Telecommunications.** 3 hours. The purpose of this course is to develop an understanding of the strategic impact on the business organization of the convergence of telecommunications and computer topics. The course includes the design and organizational restructuring issues associated with new technologies in telecommunications. Prerequisite(s): BCIS 5120 or consent of department.

**5630. Information Technology Security.** 3 hours. Examines technical and managerial issues associated with the design, development and deployment of security of client/server and other computer systems. Topics include security and privacy issues associated with architectures, platform connectivity and networks. Prerequisite(s): BCIS 4630 (or equivalent), 5110, 5120 and 5420; or consent of department.

**5640. Object-Oriented Systems.** 3 hours. Examines a variety of managerial issues associated with developing and implementing object-oriented system applications within business. Prerequisite(s): BCIS 5120 and 5420, or consent of department.

**5650. Emerging Information Technologies.** 3 hours. Examines various managerial and technical issues associated with the introduction of new information technologies within the firm. Subjects include environmental scanning for new IT developments, assessment of new IT and legal/ethical issues. Prerequisite(s): BCIS 5120 and 5420, or consent of department.

**5660. Data Administration and Project Management.**

3 hours. Examines data administration and project management functions including the implementation and acquisition of business computer information systems within the constraints of legal, technological, economic and environmental issues. Topics are analyzed with respect

to their impact on the selection, acquisition, utilization and evaluation of business computer information systems. Prerequisite(s): BCIS 5120 and 5420, or consent of department.

**5670. International Issues in Information Technology.**

3 hours. Discussion and in-depth analysis of contemporary information systems topics with emphasis on the economic and technological impact of computer information systems on the business environment. Prerequisite(s): BCIS 5120 or consent of department.

**5680. Web-Based Systems Development.** 3 hours.

Provides tools, skills and an understanding of technology, business concepts and issues that surround the emergence of electronic commerce on the Internet. In addition to acquiring basic skills for navigating the Internet and creating a personal electronic presence of the World Wide Web, the student will develop an understanding of the current practices and opportunities in electronic publishing, electronic shopping, electronic distribution and electronic collaboration. The student will also explore several of the problem areas in electronic commerce such as security (authentication, privacy), encryption, safeguarding or intellectual property rights, acceptable use policies and legal liabilities. Prerequisite(s): BCIS 5120 and 5420, or consent of department.

**5690. Topics in Information Technology.** 3 hours. Current issues dealing with the development and use of information technologies in business. Prerequisite(s): BCIS 5120 or consent of department. May be repeated for credit.

**5700. Strategic Use of Information Technology.** 3 hours.

Provides an overview and understanding of the issues involved in the strategic management of the information assets of organizations. Examines a broad range of issues and problems associated with the management of information technology (IT) and information systems (IS) and their alignment with the strategic goals of the organizations. Focuses on the managerial rather than the technical issues and views IS from the perspective of managers at all levels. Prerequisite(s): Completion of Foundation and Technology Sequence course work and within 9 hours of graduation.

**5800. Cooperative Education Internship.** 1–3 hours.

Supervised work in a job related to student's career objective. Prerequisite(s): student must meet employer's requirements and have consent of department chair or BCIS master's coordinator. Pass/no pass only; cannot be used as a support course.

**5900-5910. Special Problems.** 1–3 hours each. Open to graduate students who are capable of developing a problem independently. Problem chosen by the student and developed through conferences and activities under the direction of the instructor. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

**6010. Seminar in Business Administration.** 3 hours. Covers one or more special fields. May be repeated for credit, and two or more sections may be taken concurrently.

**6650. Seminar in Man-Machine Studies.** 3 hours. The study of computer information systems in the context of their interaction with human users, including an examination of how the human user makes decisions and is supported or inhibited in that task by the orientation and design of information systems.

**6660. Comparative Information Systems Theory.** 3 hours. Comparative study of present theories with particular attention to the role of computer-based information systems in the organizational policy of business, government and other institutions. Prerequisite(s): consent of department. May be repeated for credit.

**6670. Topics in Information Systems.** 3 hours. Topics of historical, current and future relevance in the design, development, installation and management of computer-based information systems are examined using readings, case studies and lectures. Prerequisite(s): consent of department. May be repeated for credit.

**6900. Special Problems.** 1–3 hours. Research by doctoral students in fields of special interest. Includes project research studies and intensive reading programs, accompanied by conferences with professors in fields involved. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

**6910. Special Problems.** 1–12 hours. Research by doctoral students in fields of special interest. Includes project research studies and intensive reading programs, accompanied by conferences with professors in field involved. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

**6940. Individual Research.** 1–12 hours. Individual research for the doctoral candidate. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

**6950. Doctoral Dissertation.** 3, 6 or 9 hours. To be scheduled only with consent of department. 12 hours credit required. No credit assigned until dissertation has been completed and filed with the graduate dean. Doctoral students must maintain continuous enrollment in this course subsequent to passing qualifying examination for admission to candidacy. May be repeated for credit. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

### **Decision Sciences, DSCI**

**5010. Statistical Analysis.** 1.5 hours. Basic descriptive and inferential statistics; includes frequency distributions, averages, dispersions, index numbers, time-series analysis, probability, theoretical distributions, sampling distribution, estimation, tests of significance, chi-square, regression and correlation, analysis of variance and sample design. Prerequisite(s): MATH 1190 or equivalent. This course meets the deficiency requirement of statistics (DSCI 2710 and 3710) for MBA candidates, and may be counted as part of a graduate program in a field other than business administration.

**5180. Introduction to Decision Making.** 3 hours. Emphasis on model assumptions, applying the correct statistical model and interpreting the results. Topics include simple regression, multiple regression (e.g., qualitative variable coding, model building) and experimental design (e.g., completely randomized design, randomized block design, multi-factor designs). Prerequisite(s): DSCI 5010 or equivalent.

**5210. Model-Based Decision Making.** 3 hours. Explains how model-based decision support systems aid managerial decision processes. Attention will be paid to the how and

why such a model is used in a support system environment. Course topics include the use of mathematical, statistical and business models that are embedded in decision support systems for dealing with both structured and semi-structured decision problems. Students identify opportunities and problems for which the use of modeling will enhance a decision maker's chance of success. Different type of models and decision structuring techniques will be compared and contrasted, and appropriate techniques will be illustrated to analyze real-life situations. Prerequisite(s): DSCI 5010 or equivalent.

**5220. Survey Sampling.** 3 hours. Introduction to sampling theory and applications. Attention is focused on major survey sampling techniques, including cluster, ratio, stratified and simple random sampling. Principal concepts and methods of acceptance sampling that are useful in quality control are presented, including operating characteristic curves, and single, double and sequential sampling plans for attributes and variables. Prerequisite(s): DSCI 5180 or consent of department.

**5230. Non-Parametric Statistics for Business Research.** 3 hours. Analysis of business research data that is categorical or ordinal (ranked or scaled) and is therefore not suitable for computations such as means and standard deviations. Topics include measurements of consumer preferences, market segmentation, labor or job grades, racial and sex classifications, and exempt characteristics and performance ratings. Single and multiple sample techniques are discussed. Prerequisite(s): DSCI 5010 or equivalent, or consent of department.

**5240. Data-Based Decision Support Systems.** 3 hours. A survey of data mining techniques and software is presented. Topics include extracting information from large databases and designing data-based decision support systems. Decision making in a case-embedded business environment is emphasized. Topics include latest advances in data mining research.

**5250. Statistical Techniques in Simulation.** 3 hours. An examination of construction and use of simulation models in business. Random number and process generators, construction of simulation models, introduction to special purpose simulation languages and research project. Prerequisite(s): DSCI 5010 or consent of department.

**5260. Business Process Analytics.** 3 hours. The utilization of problem solving techniques applied to the functional areas of business under risk and uncertainty. Business process analysis concepts, methodologies and tools are utilized in solving real problems in the business, government and academic settings. The foundations for this are business process analysis employing business process software, six sigma analysis and state-of-the-art statistical software. Students will develop and present solutions to the problems chosen for analysis. Emphasis is placed on problem structuring, creating solutions and presentations of solutions.

**5310. Risk and Life-Data Analysis.** 3 hours. Estimation of completing risks (likelihoods and consequences) using predictive survival analysis and failure models. Applications consider timing of events (occurrences of economic events, bankruptcies, introduction of competing products, for example) and their dependency on time dependent covariates (changing demographics, business requirements). Topics include robust methodology allowing for stratification across varying levels of risks. Prerequisite(s): DSCI 5180 or consent of department.

**5320. Quality Control.** 3 hours. Broad coverage of managerial and statistical aspects of quality control, including quality assurance and quality management. Topic coverage includes problem solving tools, process capability assessment, control charts for variables, control charts for attributes and advanced control chart methods. Prerequisite(s): DSCI 5010 or consent of department.

**5330. Enterprise Applications of Business Intelligence.** 3 hours. Current issues in the utilization of business intelligence (BI) in business, government, academia and innovation. Topics include the concepts, methodologies and tools to efficiently and effectively implement business intelligence endeavors. Emphasis is placed on current direction of BI as it is relevant to projects underway in business, government and academia across all levels of their value chains. A semester project in the area of BI relevant to a functional area of business is an important component of this course. Prerequisite(s): DSCI 5180 or consent of department.

**5900-5910. Special Problems.** 1–3 hours each. Open to graduate students who are capable of developing a problem independently. Problem chosen by the student and developed through conferences and activities under the direction of the instructor. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

### **Management Science, MSCI**

**6000. Theory and Application of Nonparametric Statistics.** 3 hours. Analysis of business research data that is categorical or ordinal (ranked or scaled). Topics include linear rank statistics, test of location for single and multiple sample problems, goodness-of-fit tests, measures of association, related samples tests and independent samples tests, rank tests for ordered alternatives and permutation tests. Prerequisite(s): DSCI 5180 or equivalent.

**6010. Seminar in Business Administration.** 3 hours. Covers one or more special fields. May be repeated for credit, and two or more sections may be taken concurrently.

**6710. Theory and Application of Stochastic Modeling.** 3 hours. Probabilistic modeling techniques with emphasis on manufacturing and services. Specific topics covered include inventory theory and methods, scheduling, queuing theory, availability, maintainability, repairability, reliability, Markov processes and renewal theory. Prerequisite(s): DSCI 5180.

**6720. Experimental Design and Statistical Modeling.** 3 hours. Emphasis is focused on both the design and analysis aspects of planned experimentation. Topics include completely randomized designs, block designs, factorial designs, design resolution and fractional factorial designs, response surface analysis, evolutionary operations in process improvement and Taguchi methods. Prerequisite(s): DSCI 5180.

**6740. Theory and Applications of Operations Research.** 3 hours. Introduction to the theoretical foundations of operation research techniques. Examples and exercises included with an application orientation. Designed to enhance one's understanding of mathematical basis of and research in operations research. Covers the two broad areas of deterministic and stochastic models in operation research. An understanding of basic calculus and matrix algebra is assumed. Prerequisite(s): DSCI 5210 or consent of department.

**6750. Management Science Seminar.** 3 hours. Organizational problems involved in the development and implementation of various management science models, as well as the applicability of the models to different technical problems in varying ecotechnological systems; in-depth study of areas of potential application of the more widely used management science models. Prerequisite(s): consent of department. May be repeated for credit.

**6900. Special Problems.** 1–3 hours. Research by doctoral students in fields of special interest. Includes project research studies and intensive reading programs, accompanied by conferences with professors in fields involved. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

**6910. Special Problems.** 1–12 hours. Research by doctoral students in fields of special interest. Includes project research studies and intensive reading programs, accompanied by conferences with professors in field involved. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration.

**6940. Individual Research.** 1–12 hours. Individual research for the doctoral candidate. Prerequisite(s): approved applications for special problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration. May be repeated for credit.

**6950. Doctoral Dissertation.** 3, 6 or 9 hours. To be scheduled only with consent of department. 12 hours credit required. No credit assigned until dissertation has been completed and filed with the graduate dean. Doctoral students must maintain continuous enrollment in this course subsequent to passing qualifying examination for admission to candidacy. Prerequisite(s): approved applications for specific problems/independent research/dissertation credit must be submitted to the COBA Graduate Programs Office prior to registration. May be repeated for credit.

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## **International Studies**

see *Undergraduate Catalog*

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## **Italian**

see *Undergraduate Catalog*

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## **Japanese**

see *Undergraduate Catalog*

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## **Jazz Studies, Music**

see Music