



**GUIDE TO GRADUATION**  
Academic Year 2008-2009

B.S. in BUSINESS ADMINISTRATION

**COMPUTER  
INFORMATION SYSTEMS**

[www.ubalt.edu/cis](http://www.ubalt.edu/cis)

**T**he Merrick School of Business is committed to providing the guidance and support you need to complete your program in a timely manner. This **Guide to Graduation** provides the in-depth information necessary to assist you in planning your undergraduate academic career. It contains a complete checklist of required courses and a suggested plan of study, as well as detailed course information, including course prerequisites and projected course offerings.

While this information will be helpful to you, you should also contact the Merrick Advising Center. They are here to assist you in planning your program plan of study and to answer any questions that you may have. Advisers are available during the day and the evening. Students in the online programs and who do not have access to the campus will be advised electronically. All new students should meet with an adviser prior to registering for their first semester to receive a personalized program plan of study.

Although your academic adviser will assist you in planning your program, it is ultimately your responsibility to complete the degree requirements and acquaint yourself with the University's academic policies.

**Call to schedule your advising appointment today!**

#### CONTACT INFO:

### Merrick Advising Center

Business Center Room 142

Phone: 410.837.4944

- **For students with last names beginning with A through K:**

#### **Judy Sabalauskas**

Academic Adviser

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- **For students with last names beginning with L through Z:**

#### **Jackie Lewis**

Senior Academic Adviser

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# PROGRAM CHECKLIST

## B.S. in Business Administration Computer Information Systems Specialization

Name:

Student ID Number:

Semester:

DEGREE REQUIREMENTS	UB COURSE	CREDITS	GEN. ED.	SEMESTER COMPLETED
<b>GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS</b>				
<b>University Requirements</b>	<i>Note: The following two courses are only required of UB freshmen.</i>			
Seminar – Applied Learning & Study Skills	IDIS 101	2		
Introduction to Information Literacy	IDIS 110	3		
<b>Lower Division Gen Ed Requirements</b>				
English Composition	WRIT 101	3	WRIT	
Literature		3	ENGL	
History or Philosophy		3	HIPL	
Fine Arts		3	ART	
Social Science 1 (Other than ECON)		3	SOSC 1	
Biological & Physical Science 1		3	GSCI 1	
Biological & Physical Science 2 (1 with lab)		4	GSCI 2	
<b>Upper Division Gen Ed Requirements</b>				
Ethical Issues in Business and Society	IDIS 302	3	IDIS	
Advanced Expository Writing (by 2 <sup>nd</sup> semester in the program)	WRIT 300	3	WRIT	
<b>BUSINESS REQUIREMENTS</b>				
<b>Prerequisite Courses</b>				
Introduction to Financial Accounting	ACCT 201	3		
Introduction to Managerial Accounting	ACCT 202	3		
Business Law I	BULA 151	3		
Oral Communications	CMAT 201 or 303*	3	SPCH	
The Economic Way of Thinking	ECON 200*	3	SOSC 1	
College Algebra	MATH 111*	3	MATH	
Introduction to Business Statistics	OPRE 201	3		
<b>Business Core Requirements</b>				
Managerial Economics	ECON 305	3		
Financial Management	FIN 331	3		
Management Information Systems	INSS 300*	3	COSC	
Human Resource Management	MGMT 300	3		
Organizational Behavior	MGMT 301	3		
Global Business Environment	MGMT 302	3		
Process & Operations Management	MGMT 339	3		
Marketing Management	MKTG 301	3		
Business Application of Decision Science	OPRE 315	3		
Statistical Data Analysis	OPRE 330	3		
Strategic Management <b>taken in final semester</b>	MGMT 475	3		
<b>COMPUTER INFORMATION SYSTEMS REQUIREMENTS</b>				
Introduction to Programming	INSS 209**	3		
Struct. Programming Using Procedural Lang.	INSS 225**	3		
Information Technology	INSS 315	3		
Systems Analysis & Logical Design	INSS 406	3		
Design of Database Management Systems	INSS 421	3		
Business Data Communications	INSS 427	3		
Approved INSS Elective (see current catalog)		3		
<b>Electives</b> - Number of electives may vary and will be determined at initial advising meeting.				
<b>Total Transfer Credits:</b> _____	<b>Total Credits Required:</b> _____	<b>Total Credits Earned:</b> _____	<b>Minimum of 120 credits</b>	

\*These courses also satisfy the following general education requirements: Math, Computer Literacy, Oral Communications, and one Social Science.

\*\*These courses may be replaced by 6 credit hours of programming language approved by the Merrick Advising Center.

# GUIDE TO GRADUATION

## B.S. in Business Administration Computer Information Systems Specialization

Below is an example plan of study for the B.S. in Business Administration program with a Computer Information Systems specialization. This is meant to act as a guide, but need not be followed in the same order for every student. Part-time students and those students transferring in credits from another university or college will need to adjust their plan accordingly. Students should consult with their adviser each semester prior to registration.

### FALL SEMESTER

### SPRING SEMESTER

#### Freshmen

IDIS 101	Applied Learning & Study Skills	WRIT 101	College Composition
IDIS 110	Intro to Information Literacy		Gen Ed or Lower-Level Elective
DVMA or MATH 111	College Algebra		Gen Ed or Lower-Level Elective
	Gen Ed or Lower-Level Elective		Gen Ed or Lower-Level Elective
	Gen Ed or Lower-Level Elective		Gen Ed or Lower-Level Elective

#### Sophomore

ACCT 201	Intro to Financial Accounting	ACCT 202	Intro to Managerial Accounting
BULA 151	Business Law	CMAT 201 or 303	Oral Communications
ECON 200	Economic Way of Thinking	INSS 225	Struct. Prog. Using Proc. Lang.
INSS 209	Introduction to Programming	OPRE 201	Intro. to Business Statistics
	Gen Ed or Lower-Level Elective		Gen Ed or Elective

#### Junior

INSS 300	Management Information Systems	INSS 421	Design of Database Mgmt Systems
INSS 315	Information Technology	MGMT 301	Organizational Behavior
MGMT 300	Human Resource Management	MGMT 302	Global Business Environment
OPRE 330	Statistical Data Analysis	MKTG 301	Marketing Management
WRIT 300	Advanced Expository Writing	OPRE 315	Business Apps. Decision Science

#### Senior

ECON 305	Managerial Economics	IDIS 302	Ethical Issues in Business & Society
FIN 331	Financial Management	MGMT 475	Strategic Management
INSS 406	Systems Analysis & Logical Design		Information Systems Elective
INSS 427	Business Data Communications		Elective
MGMT 339	Process & Operations Management		Elective

#### Important Student Information:

- Maintain a minimum cumulative grade point average of 2.0.
- Earn a minimum of “C-” in all required courses with the exception of non-Business electives.
- Earn a minimum grade of “C” in **WRIT 300 and IDIS 302**.
- Apply up to 60 credits of community college work or up to 90 credits of four-year college or university work toward degree requirements, unless an articulation agreement stipulates otherwise.
- Complete at least 30 credits at the University of Baltimore.
- **PLACEMENT TESTING** is required for MATH 111 *College Algebra* and WRIT 300 *Advanced Expository Writing*. For complete information visit the following Web site: <http://www.ubalt.edu/arc>.

**Note:** The provisions of this fact sheet are not to be regarded as a contract between the student and the University of Baltimore. The Merrick School reserves the right to change courses, schedules, calendars, and any other provisions or requirements. Students are responsible for the selection of courses, completion of degree requirements, and acquainting themselves with academic policies.

## PREREQUISITE COURSES

Course	Course Title	Course Description	Prerequisite	Semesters Offered
<b>ACCT 201</b>	Introduction to Financial Accounting	A comprehensive study of basic financial accounting processes applicable to a service, merchandising and manufacturing business. An analysis of transactions, journalizing, posting, preparation of working papers and financial statements.		Fall and Spring semesters and occasionally in the Summer.
<b>ACCT 202</b>	Introduction to Managerial Accounting	An introductory study of managerial accounting processes including job order costing, process costing, cost-volume-profit analysis, standard costs, activity-based costing, cost analysis, budgeting and managerial decision making.	ACCT 201 or equivalent with a minimum grade of C	Fall and Spring semesters and occasionally in the Summer.
<b>BULA 151</b>	Business Law I	A basic study of the judicial system, contracts, agency, fraud, sale of personal property, warranties, transfer of title and legal remedies		Fall and Spring semesters and occasionally in the Summer.
<b>CMAT 303</b>	Oral Communication in Business	Extensive practice in presentational speaking, briefing techniques, the mechanics and dynamics of group meetings and the development of interviewing, critical listening and interpersonal communication skills. Laboratory fee required. Note: If students have already completed CMAT 201, they don't need to complete CMAT 303.		Fall and Spring semesters and occasionally in the Summer.
<b>ECON 200</b>	The Economic Way of Thinking	An economist sees the world in a unique way and is able to provide a different perspective on many issues. This course presents the "economic way of thinking" with an emphasis on being able to make effective decisions in a wide variety of economic and business situations. In addition, the "economic way of thinking" is used to understand the impact of business and government policies and actions on our daily lives.		Fall and Spring semesters and occasionally in the Summer.
<b>MATH 111</b>	College Algebra	Provides students with more advanced skills required for high-level applications of mathematics. Negative and rational exponents; functions, their properties and operations including inverse functions; linear, quadratic, polynomial, rational, absolute value, exponential and logarithmic functions are explored. Students develop graphical and algebraic skills and study applications of concepts.	Adequate placement test score or successful completion of DVMA 95	Fall and Spring semesters and occasionally in the Summer.
<b>OPRE 201</b>	Introduction to Business Statistics	An introductory course in descriptive and inferential statistical concepts and techniques used in business. The study of probability concepts includes discrete and continuous probability distributions. Topics in descriptive statistics explore measures of location and dispersion and the correlation coefficient. The study of inferential statistics includes sampling distributions of statistics, confidence interval estimation and an introduction to hypothesis testing.	Adequate placement test scores or successful completion of DVMA 95: Intermediate Algebra	Fall and Spring semesters and occasionally in the Summer.

## BUSINESS CORE REQUIREMENTS

Course	Course Title	Course Description	Prerequisite	Semesters Offered
<b>ECON 305</b>	Managerial Economics	Managers and business professionals need the wide variety of tools provided by economic theory to deal with the many complex issues facing organizations in today's competitive global markets. This course focuses on the economic forces affecting the process of organizing economic activity. The primary tools of analysis are imperfect information, transaction costs and the voluntary pursuit of efficiency.	ECON 200 or 3 hours of micro- or macroeconomics	Fall and Spring semesters and occasionally in the Summer.
<b>FIN 331</b>	Financial Management	An overview and understanding of fundamental principles of financial decision making and their application to internal and external problem solving by the business enterprise. Topics include financial statement analysis and forecasting, time value of money and security valuation, corporate capital budgeting, cost of capital and capital structure. Thematic coverage encompasses the traditional, international and ethical dimensions of financial decision making.	ACCT 201 and ECON 200 or 3 hours of micro- or macroeconomics	Fall and Spring semesters and occasionally in the Summer.

## BUSINESS CORE REQUIREMENTS (continued)

Course	Course Title	Course Description	Prerequisite	Semesters Offered
<b>INSS 300</b>	Management Information Systems	Provides a fundamental knowledge of information systems and technology (IS&T) issues from the perspective of business professionals. This includes information technology concepts and vocabulary, as well as insights into IS&T applications in business organizations. Topics include searching and extracting information to solve business problems; the role of organizational context in IS&T effectiveness; the economic, social, legal and ethical impacts of IS&T; the systems life cycle approach; and key technologies such as the Internet, networking and database management systems.		Fall and Spring semesters and occasionally in the Summer.
<b>MGMT 300</b>	Human Resource Management	An exploration of competence areas necessary for effectively dealing with people in the workplace. Emphasis is placed on practical application of knowledge gained in the areas of human resource planning, job analysis, selection, training, compensation and safety/health administration. An overview of labor management relations is provided. Course coverage includes diversity, ethics, communication and international considerations.		Fall and Spring semesters and occasionally in the Summer.
<b>MGMT 301</b>	Organizational Behavior	An analysis of individual behavior, interpersonal relationships in organizations, the nature of work, values and ethics, motivation and morale, teamwork, communications and group dynamics, leadership and supervision, and organizational theory and change. Course coverage includes significant research from the behavioral sciences and examples from the international perspective.		Fall and Spring semesters and occasionally in the Summer.
<b>MGMT 302</b>	Global Business Environment	Enhances students' abilities to operate successfully in today's multicultural, global environment. Students will gain a theoretical basis for understanding key aspects of the global business environment, as applied to small companies, multinational corporations, multilateral institutions and nongovernmental organizations. Students will explore the impact of globalization at home and abroad. Course modules aim to broaden students' understanding of similarities and differences among national political economies, legal systems and sociocultural environments including world religions, business ethics and social responsibility. Students will survey business functions as they are applied to expand and manage international operations.		Fall and Spring semesters.
<b>MGMT 339</b>	Process & Operations Management	Provides an overview of managing critical resources efficiently and effectively to create physical goods, services and information goods in manufacturing and service organizations. Topics include operations strategy, project management, forecasting, location and layout of facilities, capacity and process planning, upstream and downstream supply chains and the role of the Internet, operations and environment, matching supply and demand, scheduling, job design and quality management. Integrated throughout are considerations of ethics, information systems, people involved and the domestic and international environment.		Fall and Spring semesters.
<b>MKTG 301</b>	Marketing Management	A basic course in the contribution of marketing to the firm or organization that includes decision-making tools for integrating product, price, distribution, and communication decisions and processes into an organization competing in a global environment. Students also build skills in oral and written communication.		Fall and Spring semesters and occasionally in the Summer.
<b>OPRE 315</b>	Business Application of Decision Science	A study of managerial decision-making processes using a decision sciences approach. Topics include linear and integer models and decision analysis and their application in investment problems, media selection, market research, product mix, production planning, personnel scheduling and transportation design, among others. Special emphasis is on understanding the concepts and computer implementation and interpreting the results to write management reports.	MATH 111	Fall and Spring semesters and occasionally in the Summer.
<b>OPRE 330</b>	Statistical Data Analysis	A second course in the statistical analysis of data related to business activities with emphasis on applications in various functional areas including accounting, finance, management, marketing and operations management, among others. Topics include estimation, hypothesis testing, contingency tables and chi-square test, analysis of variance and covariance, simple and multiple regression analysis and correlation analysis. Computer implementation using Excel-based statistical data analysis or other relevant software and interpretation of results for business applications are emphasized.	OPRE 201 and INSS 100 or equivalent	Fall and Spring semesters and occasionally in the Summer.
<b>MGMT 475</b>	Strategic Management	This capstone course utilizes the case method to study processes, strategy, change and policy issues arising at the general management level. This course must be taken in the final semester.	All upper-division core courses	Fall and Spring semesters and occasionally in the Summer.

## COMPUTER INFORMATION SYSTEMS REQUIRED COURSES

Course	Course Title	Course Description	Prerequisite	Semesters Offered
INSS 209	Introduction to Programming	Develops logical and analytical thinking through basic programming concepts like looping, simple sequence, decision and branching. Provides an exposure to algorithm development for the design of simple programs. Topics include basic concepts of data and file organization.		Summer session.
INSS 225	Structured Programming Using Procedural Languages	Introduces good coding practices using structured programming concepts. Modules and shared routines with single-entry and single-exit points are emphasized. Sequence, selection, repetition and nesting techniques are reinforced as acceptable means of controlling program logic. Students work on projects that involve analyzing, designing, coding, executing and testing programs.	INSS 209 or permission of the instructor	Fall and Spring semesters.
INSS 315	Information Technology	Information technology stressing the personal computer (PC) as a critically important tool in today's business environment. An advanced foundation in information technology enabling students to support personal computer users in selecting, acquiring, customizing, optimizing, maintaining and upgrading their PC hardware and system software. Topics include characteristics of CPUs, input/output devices, motherboards and expansion cards, operating systems and graphical user interface, memory management, system performance benchmarks and techniques, hardware and software technical selection, hardware and software upgrading and installation, and setup of system software. Students are introduced to local area and wide area network technologies. Ethical and legal issues related to computers, especially to PCs, are presented.	INSS 100 or equivalent	Fall semester.
INSS 406	System Analysis and Logical Design	Introduces key principles and techniques used to develop or modify information systems to support business undertakings. The course will cover the lifecycle of software systems, with an emphasis on the analysis and logical design phases. Topics will include the determination and modeling of the requirements of information systems and software, business process modeling and reengineering, data modeling, data gathering and requirements specification, interface design, and the development of system prototypes, including electronic forms and reports. Students will gain experience with leading industry development tools such as those from Oracle and PeopleSoft.	INSS 300 or permission of the instructor	Fall semester.
INSS 421	Design of Database Management Systems	Introduces the concepts and technologies relevant to the design, development and implementation of database systems. Data modeling concepts and principles of database design are used to illustrate the construction of integrated databases. Database management systems (DBMS) and their purpose, advantages, disadvantages and application in business are covered.	INSS 300 or permission of the instructor	Spring semester.
INSS 427	Business Data Communications	Provides a basic understanding of terminology, techniques and concepts of business data communications. The emphasis is on both the technical aspects of data communication and related managerial issues. Topics include, but are not limited to, physical aspects of data communication, common carrier services, local area networks, wide area networks, Internet and electronic commerce, network management and network applications.	INSS 300 or permission of the instructor	Fall semester.

### Choose one course from the following:

Course	Course Title	Course Description	Prerequisite	Semesters Offered
INSS 327	Program Design and Data Structure	Develops object-oriented programming skills that include abstract data type construction, data and file structure, and IS applications using data structures, including indexed files.	INSS 225 or equivalent or permission of the instructor	Spring semester.
INSS 401	Internet and Business	Provides an understanding of the Internet and the information superhighway through hands-on experience with the main Internet services and applications. The course also answers questions about how to use the Internet for communications; search for free information, files and programs; and create a presence on the Internet for individuals and businesses using hypermedia and the Web.	INSS 300 or permission of the instructor	Summer session.

**Choose one course from the following:** (continued)

Course	Course Title	Course Description	Prerequisite	Semesters Offered
<b>INSS 431</b>	Electronic Commerce	Provides both a managerial and technical perspective on e-commerce applications, with an emphasis on the operational, tactical and strategic applications of e-commerce and the major technologies involved in their development. The course will cover the different types of e-commerce, the technologies and techniques involved and the major issues facing organizations conducting electronic commerce. Managerial topics include mobile commerce; business, consumer and government e-commerce uses; and legal, ethical and regulatory issues. Technical topics explored include network infrastructure, e-commerce security and technologies for data transformation and exchange, such as XML.	INSS 300	Spring semester.
<b>INSS 452</b>	Web Server Management and CGI Programming	Provides intermediate skills in developing interactive, server-based applications using the Web common gateway interface (CGI) and includes the installation and management of Web server software, e.g., Apache and other freeware. PERL and CGI programming, Visual Basic, C or C++ may be used as an alternative CGI programming language.	INSS 401 and INSS 225 or 327 or permission of the instructor	
<b>INSS 453</b>	Internet and Network Security	Familiarizes students with basic security threats on networks connected to the Internet and basic tools to provide user and system security resources available on the Internet. The main focus is on digital and infrastructure security. Topics include security framework overview; footprinting; scanning; enumeration; hacking framework; backdoor servers and Trojans; root-kits; Windows (98/NT, 2000/XP) and Linux vulnerabilities; dialup, VPN and network devices vulnerabilities; firewalls; Intrusion Detection System (IDS); Denial of Service (DoS) and Ddos; buffer overflow; spyware; phishing; social engineering and protecting the Web end-user. This is a project-oriented course using a restricted-access UB Lab to practice the use of hacking and security tools.	INSS 315 and INSS 427 or permission of the instructor	Fall semester.
<b>INSS 454</b>	Operating Systems	Functions of operating systems, including process management and concurrency, memory management, scheduling, and user and file management security are studied, as are hardware features required by modern operating systems. Course content also includes a study of symmetric multiprocessing, clusters' hardware and operating systems concepts, and the capabilities of several commercial operating systems. Provides hands-on experience in a specialized laboratory that includes PC, work-station, and mini- and mainframe computer operating systems, including system setup and basic system administration functions.	INSS 225 or 327, or permission of the instructor	Fall semester.
<b>INSS 460</b>	Component-Oriented Programming	The current real-world software development environment is characterized by complex, sophisticated frameworks of interdependent tools, functionalities and languages. Architectures such as J2EE and .NET facilitate the design and development of component-based, distributed, reusable software code for business applications. This course provides an overview of the concepts, principles and practices of component-oriented applications development and fosters hands-on skills using one or more architectures. Topics include software design, development, assembly and deployment issues, comparison with object-oriented approaches, component standards, and libraries and interoperability concerns.	INSS 209	Spring semester.
<b>INSS 495</b>	Internship in MIS	Provides real-world MIS experience in an organization. This course requires an internship with a qualified firm based on explicit statement of student responsibilities and faculty/firm monitoring mechanism. Students will work closely with both the firm and a faculty member.	Completion of 15 hours of INSS courses (excluding INSS 300) with a minimum GPA in those courses of 3.0 and permission of the instructor	See your academic advisor.
<b>INSS 497</b>	Special Topics in Information Systems	The INSS faculty, from time to time, offer an opportunity to integrate new material into the undergraduate program reflecting changes in the field and in the educational needs of students.	Determined by instructor	Offered according to demand.
<b>INSS 499</b>	Independent Study: Information Systems	An independent study completed under the direction of a faculty member.	See your academic advisor	



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