

**Addendum to the May 2010
Grantham University Catalog**
(Effective June 2010)

This addendum is to be used in conjunction with the May 2010 Grantham University Catalog and is part of that official document. This addendum contains updates and changes effective June 18, 2010. All changes and additions listed here take precedence over information contained in the May 2010 University Catalog. All information contained in this addendum is subject to change without notice.

New Information Systems Programs

Bachelor of Science Information Systems

The Bachelor of Science in Information Systems (BS-IS) prepares the student to organize, coordinate, direct research and facilitate the computer-related activities of a business. Electives allow students to pursue further coursework in information systems or to take courses in an area in which information systems are applied, such as business or health informatics. Upon completion of the degree students are prepared for work in a wide range of professions including database specialist, web designer, applications programmer and systems analyst.

Bachelor of Science Information Systems Program Outcomes

Upon completion of this program, students will be able to:

- Recognize and define concepts of computer systems, hardware, software, programming languages and networks
- Examine a problem, identify and define the computing tools and techniques relevant to its solution
- Effectively convey technical knowledge in written form to a variety of audiences
- Analyze the professional, legal, and ethical impact of Information Systems on individuals, business organizations and society
- Design, build and maintain distributed databases and web-based systems
- Identify and evaluate the role of Information Systems within a business organization
- Apply project management principles to the design of Information Systems solutions in a business environment

Bachelor of Science Information Systems Program Core	Lec/Lab	General Education Courses	
GU100 Student Success	1	MA105 College Algebra	3
CS192 Programming Essentials	3	EN101 English Composition I	3
CS200 Programming in Java (CS192)	3/1	GP210 American Government I	3
BA215 Business Statistics	3		
CS216 Computer Networks	3		
CS263 Programming in C (CS192)	3/1		
IS242 Management Information Systems	3		
IS212 .NET Concepts and Principles (CS116 or CS197)	3/1		
IS231 E-Commerce	3		
IS259 Database Applications (CS192)	3		
IS301 Web Design I (CS192)	3/1		
IS311 Security Operations	3	General Education Electives	
IS336 Information Systems Analysis (CS192)	3	Communication GE Courses	6
IS351 Information Systems Project Management	3	Computer Literacy GE Course	3
IS306 Web Design II (IS301)	3/1	Life/Physical Science and Math	9
IS337 Information Systems Design & Imp (IS336)	3	Behavioral & Social Sciences	9
IS376 Advanced Database Systems (IS259)	3	Humanities and Fine Arts	6
CS405 Software Engineering (CS336 or IS337)	3		
IS412 .NET Implementation (IS212)	3/1		
IS498 Senior Research Project (completion of all IS courses)	3		
Program Core Credit Hours	64	Total General Education Credit Hours	42
Program Electives			
CS/IS 300 level or above or any BA/HSN	9		
Elective Credit Hours	9		
Total Electives	18		
Total Program Credit Hours			124

Bachelor of Science Information Systems Security

The Bachelor of Science in Information Systems Security prepares students to apply the technologies and procedures professionals use to secure business systems. By learning to identify security risks and create effective strategies to stop them, students will discover how Information Systems Security is essential to organizational success. The curriculum focuses on operating systems, computer architectures, networking protocols and security basics. Students will possess the knowledge to analyze the role of security within an organization as well as educate employees within the business about their security responsibilities. Upon completion of the degree, students are prepared to sit for industry standard certifications in Network+, Security+, and CISSP.

Bachelor of Science Information Systems Security Program Outcomes

Upon completion of this program, students will be able to:

- Recognize and define concepts of computer system, hardware, software, programming languages, and networks
- Examine a problem, identify and define the computing tools and techniques relevant to its solution
- Effectively convey technical knowledge both verbally and in written form to a variety of audiences
- Analyze the professional, legal, and ethical impact of Information Systems Security on individuals, business organizations and society
- Identify and analyze information security risks within today's business environments
- Apply industry standard techniques to secure large-scale networks

Bachelor of Science Information Systems Security Program Core	Lec/Lab	General Education Courses	
GU100 Student Success	1	MA105 College Algebra	3
CS192 Programming Essentials	3	EN101 English Composition I	3
CS200 Programming in Java	3/1	GP210 American Government I	3
BA215 Business Statistics	3		
CS216 Computer Networks	3		
CS263 Programming In C (CS192)	3/1		
IS242 Management Information Systems	3		
IS211 Intro to Information Systems Security	3		
CS265 Programming in C++ (CS192)	3/1		
CS316 TCP/IP Networks (CS216)	3		
IS311 Security Operations	3		
IS351 Information Systems Project Management	3		
CS336 Systems Analysis and Design (CS192)	3	General Education Electives	
CS340 Operating Systems (CS192)	3	Communication GE Courses	6
IS355 Risk Management	3	Computer Literacy GE Course	3
IS411 Network Security (CS316)	3	Life/Physical Science and Math	9
CS386 Systems Architecture (CS336)	3	Behavioral & Social Sciences	9
IS431 Access Control Systems	3	Humanities and Fine Arts	6
IS461 Cryptography (IS211)	3		
IS391 Special Topics in Information Systems	1		
IS471 Computer Forensics	3		
IS481 Database Security	3		
IS498 Senior Research Project (completion of all IS courses)	3		
Program Core Credit Hours	68	Total General Education Credit Hours	42
Program Electives			
CS/IS 300 level or above or any BA/HSN	6		
Elective Credit Hours	9		
Total Electives	15		
Total Program Credit Hours			125

New Performance Improvement Program

* Master of Science in Performance Improvement

The 36 credit hour Master of Science in Performance Improvement program provides students with advanced skills in organizational resource management. Students are prepared to manage complex organizational challenges through performance improvement strategies and are adept at analyzing an organization, generating strategies to maximize performance and implementing solutions.

Master of Science in Performance Improvement Program Outcomes

At the successful completion of this program, students will be able to:

- Evaluate organizational and human performance issues
- Integrate performance improvements with business needs
- Prepare proposals and develop strategies to influence stakeholder decisions
- Determine viable interventions to improve performance
- Design and develop intervention products
- Measure and revise performance improvement solutions
- Organize and manage performance improvement projects
- Discern professionalism related to performance improvement consulting

Course #	Course Name	Credit Hours
HPI501	Introduction to Organizational and Human Performance	3
HPI505	Principles of Human Performance Technology	3
HPI507	Learning and Performance	3
BA590	Organizational Behavior [BA420]	3
HPI513	Performance Consulting, Persuasive Communication and Influence Process	3
HPI515	Measurement and Assessment Strategies	3
HPI620	Strategic Human Resources Management	3
HPI641	Learning Theories and Technology	3
HPI633	Knowledge, Learning and Enterprise Systems	3
HPI631	Performance Analysis	3
HPI632	Evaluating Results and Benefits	3
HPI699	Capstone Performance Project	3
	Total Program Credit Hours	36

* This program will be available for enrollment beginning July 14th, 2010

Course Descriptions

HPI 501 Introduction to Organizational and Human Performance 3

Students illustrate the application of knowledge about people and groups in an organization, using the systematic approach of the fundamental concepts and theories of performance improvement. Students interpret people-organization relationships in terms of the whole person, whole group, whole organization, and whole social system. This course provides an introduction to organizational and human performance through individual organizational and social objectives.

Prerequisite: None

HPI 505 Principles of Human Performance Technology 3

Students investigate the history, theories, and application of knowledge of Human Performance Technology (HPT). Students apply human performance improvement principles to other disciplines including but not limited to total quality management, process improvement, behavioral psychology, instructional systems design, organizational development, and human resource management. Students also practice assessing alignment and performance gaps, creating process flows, and identifying improvement opportunities within organizations.

Prerequisite: None

◆ *HPI 507 Learning and Performance* 3

Students review the learning and development functions, processes, models, theories and theorists by examining how individual and organizational learning are interdependent. Students learn how to excel in seeing systems, collaborating across boundaries and move easily from solving problems to creating desired futures by understanding the role of motivation in the learning process which affects the individual and organizational performance.

Prerequisite: None

HPI 513 Performance Consulting, Persuasive Communication and Influence Process 3

Students examine the role of performance consulting and create a communication style in which effective consulting may occur. This course applies the history and knowledge of a process in which a client and a consultant partner to achieve the strategic outcomes of the organization. By focusing on a persuasive approach and the student's influence, emphasis is placed on the building of relationships and generating positive strategic organizational outcomes.

Prerequisite: None

HPI 515 Measurement and Assessment Strategies 3

In this class, students utilize instruments that set performance goals and targets, and monitor progress. Assessment strategies assure that goals are being accomplished and that appropriate interventions are implemented. Students apply measurement strategies to assess the progress and completion of organizational goals.

Prerequisite: None

◆ *HPI 620 Strategic Human Resources Management* 3

Students focus on the human resource functions within an organization including recruitment, management, and providing direction for the people who work in the organization. By effectively managing a workforce through human resources, students examine how organizational success is achieved. Students design recruitment, management, and strategic HR system approaches for performance improvement.

Prerequisite: None

HPI 641 Learning Theories and Technology 3

Students compare theories of how technology is used to help individuals learn effectively. By studying learning theories students use technology to create problem-based training and development opportunities for individuals, teams, and organizations. Students explore the influence of technical integration into learning, specifically training and development for the ultimate aim of improving organizational performance.

Prerequisite: None

HPI 633 Knowledge, Learning and Enterprise Systems 3

Students analyze the impact of computers and technology on organizational performance improvement. Students apply large-scale, integrated application-software packages that use the computational, data storage, and data transmission power of modern information technology to support processes, information flows, reporting, and data analytics within and between complex organizations to understand the relationship of enterprise systems to human performance.

Prerequisite: None

HPI 631 Performance Analysis 3

Students apply one or more performance tools to investigate the reasons for performance deterioration. A four step process will be utilized for implementing a performance analysis system. Skills are built-in systematically identifying opportunity types, building analysis strategies, gathering data, and reporting analysis results. By understanding the application of a structured model for performance analysis the practice of investigation of performance deterioration emerges.

Prerequisite: None

HPI 632 Evaluating Results and Benefits 3

Students assess the measuring activity when gauging performance improvement. Students plan an assessment activity, track the changes over time and evaluate the results, the opportunities for improvements, and benefits of the outcomes. This comprehensive approach to evaluation offers students skills as efficient consultants who can leverage data in to a decision making process.

Prerequisite: None

HPI 699 Capstone Performance Project 3

Students synthesize and articulate comprehensive problem-solving abilities as performance improvement experts. Students customize a project, execute it, and write the results in a final project.

Prerequisite: Completion of all HPI courses

◆IS212 .NET Concepts and Principles 3/1

This course is an intermediate computer science course presenting the fundamental concepts and principles of Microsoft's Visual Basic (now known as .NET) application infrastructure. In this course, students investigate essential concepts and fundamental principles of .NET. The course focuses on what makes up .NET and how those components interact in the context of application development.

Prerequisite: CS116 or CS197

◆ IS231 E-Commerce 3

This course is designed to familiarize students with current and emerging electronic commerce technologies using the Internet. Topics include Internet technology for business advantage, managing electronic commerce funds transfer, reinventing the future of business through electronic commerce, business opportunities in electronic commerce, electronic commerce Web site design, and social, political and ethical issues associated with electronic commerce, and business plans for technology ventures. The course introduces the realities and potential of electronic commerce to a new generation of managers, planners, analysts, and programmers.

Prerequisite: None

IS242 Management Information Systems 3

Students apply the fundamental concepts of Information Systems to business. Topics include coverage of information technology in management, information systems in decision-making, planning of information systems, systems developments, controls and security measures, and electronic commerce coverage.

Prerequisite: None

◆IS311 Security Operations 3

Students identify the principles and practices of secure operation and management of information systems. Topics include identification of information assets, documentation of policies, standards, procedures and guidelines that ensure confidentiality and availability. Principles and practices of analysis and monitoring of systems security are also addressed.

Prerequisite: None

◆IS336 Information Systems Analysis 3

Students are introduced to the tools and techniques used in systems analysis and design, including Program Evaluation and Review Technique (PERT) and Gantt charts, economic feasibility analysis, data flow diagramming, and other modeling techniques. The primary focus of the course is ascertaining the early phases of the Systems Development Life Cycle.

Prerequisite: CS192

◆IS351 Information Systems Project Management 3

Students analyze the technical and managerial aspects of project management as identified by the Project Management Body of Knowledge (PMBOK). Emphasis is placed on defining project management and its relationship to other business disciplines. Topics include organizational structure and culture, network diagrams, critical chain scheduling, cost estimation and project control procedures.

Prerequisite: None

IS355 Risk Management 3

Students explore the application of risk management in business-related information security situations. Topics include discussion of legal, ethical and professional issues in information security, analysis of firewalls, Virtual Private Networks (VPNs) and intrusion detection systems, and application of security plans and access control to secure information.

Prerequisite: None

IS391 Special Topics in Information Systems 1

Study of a significant topic in information systems that is not available through other program offerings.

Prerequisite: None

IS411 Network Security 3

This course introduces students to techniques, methodologies and tools used in building and maintaining secure networks. Topics include types of attacks, countermeasures and prevention techniques. Security assessments, vulnerability testing and penetration testing are also studied. Lab exercises address assessing protocol, network and code vulnerabilities.

Prerequisite: None

◆ IS412 .NET Implementation 3/1

This course is an advanced computer science course presenting the concepts and principles of Microsoft's Visual Basic (now known as .NET implementation). This course focuses on the implementation of .NET using multiple languages. Students use code to design, implement, and deploy Visual Basic .NET applications.

Prerequisites: CS212

◆IS431 Access Control Systems 3

This course focuses on the techniques to identify an authorized user, determine what the user is allowed to do, and audit what the user did. Virtually every exploit targets one or more of these techniques. Students discuss common exploits and abuses and the tools the InfoSEC professional has to safeguard against them. Students apply these tools to a variety of practical tasks.

Prerequisite: None

IS461 Cryptography 3

This course explores the ways in which cryptography can be used to protect communications traffic and sensitive data. Course topics include symmetric vs. asymmetric (public-key) ciphers; hash algorithms; message authentication codes; mathematical underpinnings of cryptography; cryptanalysis; public-key infrastructure; and implementation tradeoffs. Students gain hands-on experience in state-of-the-art technologies through completion of weekly lab exercises. The primary focus of the course is on building critical thinking and problem-solving skills.

Prerequisite: IS211

◆IS471 Computer Forensics 3

Students explore the methods and tools utilized for collecting and preserving electronic digital evidence for the computer forensic process. Topics include the forensic examination, crime categories, analysis, laws governing forensics and report writing. Experience with forensics tools and techniques are provided.

Prerequisite: None

IS498 Senior Research Project 3

This capstone course requires students to demonstrate the knowledge and skills they gained throughout the degree program by completing a major research project.

Prerequisite: Completion of all IS degree requirements