

Ferris State University
B.S. Degree in Information Security & Intelligence

Delta College
AAS in CST – Information Security & Technology Program

Articulation Guide

NAME: _____ ID#: _____ DATE _____ ADVISOR: _____

Major Core Requirements (54 credits): Delta College equivalent courses are identified in third column. FSU classes are in bold. Highlighted courses are available online.

Required Courses	Course Title– FSU Prerequisites Shown in Parentheses ()	Delta Equivalent Courses	FSU S. H.	Grade
ACCT 201	Principles of Accounting (MATH 110 w/C- or better or 19 on ACT or 460 on SAT or one of the following MATH courses 115 to 120, 126, 130, 132, 135)	ACC 211	3	
PREL 240	Public Relations Principles (ENGL 150)	FSU class	3	
GISC 225	Principles of Geographic Information Systems	FSU class	3	
STQM 200	Introduction to Data Mining (MATH 115, 116 or 117 or 24 ACT or 560 SAT)	FSU class	3	
STQM 260	Introduction to Statistics (MATH 115, 116 or 117 or 24 ACT or 560 SAT)	MTH 208	3	
STQM 360	Risk Analysis and Strategy	FSU class	3	
ISYS 200	Database Design & Implementation (ISYS 105 or demonstrated competency)	CST 263	3	
ISYS 411	Project Management (Senior Status)	FSU class	3	
HSCJ 202	Principles of Information Security	CST 266	3	
HSCJ 210	Digital Forensics and Incident Response	FSU class	3	
HSCJ 317	Fraud Examination	FSU class	3	
ISIN 200	All Things Digital	FSU class	3	
ISIN 300	Visual Analysis and Investigations	FSU class	3	
ISIN 330	Organized Crime, Gang and Terrorist Organizations	FSU class	3	
ISIN 301	Data Intelligence Competitive Theory (ISIN 300, ISYS 200)	FSU class	3	
ISIN 429	Legal & Ethical Issues in Information Security	FSU class	3	
ISIN 491	Internship	FSU class	3	
ISIN 499	Capstone Experience (Senior Standing)	FSU class	3	
Total Major Core Credits Required: 54 credits				
Concentration or an approved minor:				
Digital Forensics – 15 credits required				
HSCJ 315	Advanced Digital Forensics and Response (HSCJ 210)	FSU Class	3	
ISYS 216	Intro to Java Programming (ISYS 110)	CST 183	3	
ISYS 371	Advanced Database Design & Implementation (ISYS 200 & ISYS 216)	CST 159 & 259	3	
ISYS 325	Networking Essentials (ISYS 105 or demonstrated competency)	CST 161	3	
ISYS 277	Linux Network Administration (ISYS 105 or demonstrated competency)	CST 165 & 265	3	
Total Concentration Credits Required: 15				
Directed Electives: 12 Credits Required (to total 120 credits for the BS Degree)				
Note: Discuss with Advisor - 300-400 level classes may be needed here to fulfill the 40 credit 300-400 level requirements in the degree				
		FSU or Delta	3	
		FSU or Delta	3	
		FSU or Delta	3	
		FSU or Delta	3	

FALL 2009

General Education Requirements (40-41 Credits):

Required Courses	Course Title FSU Prerequisites Shown in Parentheses ()	Delta Equivalent Courses	FSU S.H.	Grade
Communication Competence—12 Credits Required				
COMM ELEC	COMM 105, Interpersonal Communication or COMM 121, Fundamentals of Public Speaking	COM 112 or COM 114	3	
ENGL 150	English 1 (ENGL 074 w/C- or better or 14 > ACT or 370 > SAT)	ENG 111	3	
ENGL 211 or ENGL 250	Industrial and Career Writing (ENGL 150 w/C- or better) English 2 (ENGL 150 w/C- or better)	ENG 113 or 213 or ENG 112	3	
ENGL 311 or ENGL 321 or ENGL 325	Advanced Technical Writing (ENGL 250 or ENGL 211 w/C or better) Advanced Composition (ENGL 250 or ENGL 211 w/C or better) Advanced Business Writing (ENGL 250 or ENGL 211 w/C or better)	FSU Class	3	
Scientific Understanding – 7 to 8 Credits Required				
This requirement can be met with science courses in the following areas: Astronomy, Biology, Chemistry, Geology, Physical Science, Physics, or FSU's GEOG 111 or GEOG 121				
	Scientific Understanding Elective with Lab	Delta Lab Science	4	
	Scientific Understanding Elective (Lab or Non-Lab)	Delta	3 or 4	
Quantitative Skills -- This requirement can be completed by one of the following options: (1) pass Math 115 or higher, (2) pass course proficiency exam in Math 115 or higher, (3) pass the College Algebra CLEP exam, or (4) an ACT math subtest score of 24 or higher.				
MATH 115	Intermediate Algebra (ACT of 19-21 or SAT of 350-450)	MTH 119 or higher	3	
Cultural Enrichment – 9 Credits Required				
Credits can be earned in one or more subject areas; however, one three-credit course must be at the 200 level or higher. Select from the following subject areas: Art, Art History, any foreign language (German, Spanish or French at Delta), History, Humanities, Literature, Music, Philosophy (but not Logic), or Theatre.				
	Cultural Enrichment Elective	Delta Elective	3	
	Cultural Enrichment Elective	Delta Elective	3	
	Cultural Enrichment Elective (200 level or above)	PHL 210	2	
Social Awareness – 9 Credits Required				
Subject areas include: Anthropology, Economics, Geography (but not Physical Geography; this course is considered a science elective), Political Science, Psychology or Sociology. Criteria: (1) One three-credit course must be 200-level or higher. (2) Must have two subject areas.				
	Social Awareness Elective	Delta Elective	3	
	Social Awareness Elective	Delta Elective	3	
	Social Awareness Elective (200 level or above)	Delta Elective	3	
Minimum of 40 General Education Hours Required				
<p>The University requires that one or more general education courses meet the Global Consciousness and Race, Ethnicity and Gender (REG) criteria. Students can take one course that meets both the Global and REG requirement simultaneously. Delta courses meeting the various criteria and that are particularly suited for the ISI degree are listed below:</p> <p>Cultural Enrichment: PHL 213, Introduction to Ethics</p> <p>Social Awareness: ECN 221, Principles of Economics I ECN 222, Principles of Economics II GEO 255, Third World Development or SOC 265, 3rd World Development</p> <p>Global Consciousness GEO 223, Geography of Europe POL 222, Politics of Middle East</p> <p>Global, REG and Social Awareness: POL 221, Comparative Government SOC 231, Cultural Anthropology (SA Foundation Course)</p> <p>Global Consciousness and Social Awareness: GEO 113, World Cultural Geography</p> <p>Global Consciousness and Cultural Enrichment: Foreign language course from Delta IHU 234, World Religions or SSI 234, World Religions</p> <p>REG and Social Awareness: POL 212, State & Local Government POL 225, World Politics PSY 211, General Psychology SOC 211, Principles of Sociology (SA Foundation Course) SOC 212, Social Problems (SA Foundation Course)</p>				
FALL 2009				

Advising Notes:

Global consciousness requirement satisfied by: _____

Race/Ethnicity/Gender requirement satisfied by: _____

Admission Requirements:

1. High school students must have a 3.0 cumulative GPA (on a 4.00 scale) and an ACT composite score of 22. College students must have a 2.70 cumulative GPA to be admitted to this program.
2. Apply online at www.ferris.edu/offcampus and submit official high school or college transcripts and ACT scores to Ferris State University, Office of admissions and records, 1201 Campus Drive CSS201, Big Rapids, MI. 49307-2288
3. Admission to Delta College is also essential since many courses in the degree are completed through Delta as a dual enrolled student.
4. Financial aid is available when dually enrolled in classes at Ferris State University and Delta College. All financial aid will only originate with FSU to cover costs at both institutions. For more information regarding the financial aid process contact the main campus Financial Aid Office at 231-591-2110. For general financial aid questions you can also go to finaid@ferris.edu or for community college consortium questions go to cnsrtfinaid@ferris.edu.

Graduation Requirements:

1. A minimum of 120 semester credits must be completed for graduation – 40 of which must be 300 level or higher.
2. A 2.0 cumulative GPA is required in the major, concentration and overall for completion of the ISI degree.
3. At least 30 FSU semester credits must be completed to fulfill FSU residency requirements.
4. Students must meet the University General Education Requirements (*Refer to Delta guidance regarding meeting the Ferris General Education requirements and /or Delta MACRAO requirements*).

For more information or answers to your questions, contact us at:

Phone: 616.451.4777 or 800.998.3425

Fax: 616.451.4740

E-mail: fsugr@ferris.edu

Ferris State University – Grand Rapids

151 Fountain Street NE

Grand Rapids, MI 49503

Ferris ISI Core Course Descriptions (3 credit classes)

GISC 225-Principles of GIS

This course will explore fundamental principles of Geographic Information Systems (GIS) and its applications including hardware and software. Topics covered include: database concepts, algorithms to manage spatial data, cost benefit analysis, GIS project management, and digital data dissemination methods using internet technologies. Students will work with database management, raster and vector GIS applications software on various case studies including nature and environment conservation, real estate administration, marketing and city management.

GISC 282-Geographic Info Systems

Continuation of GISC 225 which describes spatial data collection techniques, and land information systems. Spatial data collection techniques such as land surveying, Global positioning System, Program metric mapping, remote sensing, Lidar, and mobile mapping will be studied. Geodetic and Cartographic data from Federal Government will be explored as well as mapping procedures accuracy standards. Principles of the cadastre system will be taught including the public land survey system, property descriptions, and boundary surveys.

GISC 382-GIS Data Analysis and Specialization

Continuation of GISC 282. Key topics include the point process and network analysis, and advanced surface operations (interpolation, line of sight, volume calculation, drainage, contour line mapping, and 3D visualization). Students will perform an independent research on one GIS specialty application (e.g., homeland security and criminal justice, transportation, health care, natural resources, environment and nature protection, city and county management, utilities, and public administration).

HSCJ 202-Principles of Information Security

Students explore the concepts of information security from both historical and emerging perspectives. Topics include the capabilities and threats of technology to information security, computer crime, homeland security, as well as legal, ethical and professional issues. The history, nature, and extent of computer crime and the roles and responsibilities of the legal system will also be investigated.

HSCJ 210-Digital Forensics and Incident Response

Students survey the role of computer technology in digital forensics and the characteristics of an incidence response plan and its implementation. Students will utilize several digital forensic tools and techniques for surveillance gathering evidence, and reconstructing crime scenes.

HSCJ 315-Advanced Digital Forensic and Response

Students explore advanced digital forensic techniques and develop skills to deal with situations require mining a sophisticated response. Emerging and next generation computer technologies and threats, as well as proactive security measures and threat prevention will be investigated. Students will utilize several digital forensic tools and techniques for surveillance, gathering evidence, and/or crime scene reconstruction for incidence processing.

HSCJ 317-Fraud Examination

Students will examine the fundamental reasons of why people commit fraud. Participants will investigate and explore how opportunity, pressures and rationalization are linked together to foster an atmosphere that can allow fraud to occur. Additionally, students will learn basic examination techniques for discovering fraud and more importantly, how to deter fraud from taking place.

ISIN 200-All Things Digital

Students investigate various digital devices including computers, cameras, surveillance equipment, and small devices and how to utilize them to advance security objectives. Students also work with various forms of media to understand the capabilities of each. Communication methods and networking are also explored.

ISIN 300-Visual Analysis Investigations

Introduction to transforming information into a visual format for analysis, interpretation and reporting. Students learn to deal with investigative issues involved to gather information, digital implications and strategies for effectively dealing with data from multiple sources. Analysis of digital data such as phone and financial records, surveillance information and visual media.

ISIN 301-Data-intelligence Comp Theory

Students examine the scientific process as it applies to hypothesis development. Investigation includes the analysis of various approaches to explaining events and developing competing hypothesis. The role of data and information in the development and support of intelligence in organization, national and international realms is also studied.

ISIN 330-Organized Crime-Gang-Terrorist Organizations

Students investigate the history of significant organized crime, gangs and terrorist organizations and the techniques they utilize. Examination will include the culture and organization of contemporary organized crime, gangs and terrorist groups, as well as the threats they pose. Methods used to combat the work of these organizations will be analyzed.

ISIN 350-Organizational Planning and Security Measures

Students examine organizational structure, environment and planning strategies to determine associated risks. Study includes the implications of various approaches to security on the overall safety of the organization, as well as development of risk plans, security measures and countermeasures to address organizational needs.

ISIN 429-Legal-Ethical Issues Information Security

This course is intended to investigate the legal and ethical issues in Information Security. Ethical practices, privacy, copyright and licensing issues are research. Issues dealing with proprietary and personal information, as well as electronic technologies will be studied. An understanding of current and future impact on information systems and management strategies will be explored.

ISIN 499-Capstone Experience

This course provides students with an opportunity to demonstrate the skills and knowledge they have obtained in their program through project and/or portfolio methodologies and how they would be utilized in the workplace. Students will also investigate how information security is incorporated in their chosen path.

ISYS 371-Adv. Database Design and Implementation

Emphasis is placed on Entity-Relationships and Relational models, data definition languages, and manipulation languages. Structured Query Language (SQL) is used to develop database objects such as databases, logs, tables, indexes, views, constraints, defaults, roles, rules, stored procedures, and triggers. Database design is reviewed. Application development and modeling tools are discussed. Projects requiring the development of integrated databases are assigned.

ISYS 411-Project Management

An in-depth study of project management techniques currently employed for business and information systems projects. Topical areas will include project organization, planning and administration control and leadership. The need for accurate estimating, scheduling, communicating and reporting will be stressed through the use of several cases/projects. Senior Status

PREL 240-Public Relations Principles

Nature and function of public relations and how it is applied to build positive relationships for business, government, educational, sports, non-profit, and other organizations. Explores the production and use of public relations brochures, news releases, newsletters, audiovisuals, the Internet, special events and other tools. Studies the effective application of these tools to strategic and tactical public relations programs.

STQM 342-Data Mining Tools

Principles and tools for extracting information and creating knowledge from large databases through application of software. Tools include k-means

clustering, classification, association, and others. Software applications to large data sets (e.g. Excel, Access, SQL Server, SPSS).

STQM 380-Data Mining Processes

Explore and apply processes for customer needs assessment, goal formulation, data selection and preparation, pattern detection and modeling, information and knowledge creation, and reporting. Explore specific data mining approaches such as knowledge discovery databases (KDD) and Cross Industry Standard Process for Data Mining (CRISP-DM). Case studies illustrate data mining processes in varied areas of application such as business, criminal justice, education, government, or healthcare. Software application (e.g. Access, Excel, SQL Server, SPSS).

STQM 360-Risk Analysis and Strategy

Introduction to risk analysis and strategic approaches, principles, practices, tools, technology, and software. Risk analysis tools and approaches (e.g. planning, structured risk assessment, research and information discovery, probability and expectation, prioritization). Risk strategies, disposition, decision support, human resource development/management, and improvement/change strategies and tools. Application of risk analysis software. Applications and case studies to industry-specific events and projects (e.g. sport entertainment, security).

STQM 200-Introduction to Data Mining

Explore the relationship between data mining, data warehousing, and organizational needs. Explore basic data mining processes, methods and tools in varied areas of application such as business, manufacturing, healthcare, education, criminal justice, or government. Explore knowledge requirements across varied application areas as well as robust data mining processes and tools to serve varied needs. Case studies illustrate varied knowledge needs and data mining processes, methods, and tools. Introduces basic data mining software (e.g. WEKA, Excel based, or SPSS based).
