FAIRMONT STATE UNIVERSITY™

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Approved by the Curriculum Committee on April 7th, 2020

MEMORANDUM

TO: Faculty Senate

FROM: Susan Ross

DATE: April 7, 2020

SUBJECT: Curriculum Proposal #19-20-21

The intent of this proposal is to request a revision of the curriculum for the BS major in Information Systems Management (ISM). Changes in required courses for the ISM program curriculum include: a) deletion of three courses, including BSBA 2201, BSBA 2202, and BISM 2800 (9 credit hours will be deleted); b) add six new required courses, as described in the proposal (18 credit hours will be added); and change BISM 4300 (3 credit hours) from elective to required status.

In addition, two course numbering changes are proposed: BISM 2200 Business Information Tools will be moved from a sophomore level course to a second-semester freshman level course and will be renumbered as BISM 1500; and BISM 3200 Management Information Systems will be moved from a junior level course to a first-semester sophomore level course and will be renumbered as BISM 2000.

This curriculum proposal is being driven by the noted areas for improvement within the program as a result of the program assessment process as well as recent changes in the Accounting curriculum course offerings and changes to the general studies requirements.

cc: Richard Harvey
Lori Schoonmaker
Laura Ransom
Cheri Gonzalez
Rebecca Giorcelli

INFORMATION SYSTEMS MANAGEMENT CURRICULUM PROPOSAL

Proposal Number: **#19-20-21**

School/Department/Program: School of Business & Aviation
Department of Marketing & Management Studies
Information Systems Management Program

Preparer/Contact Person: Dr. Rebecca Giorcelli
Chair, Marketing & Management Studies
Professor, Information Management Studies
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Date Originally Submitted: January 2020

Revision: Revision #1 - March 17, 2020

Implementation Date Requested: Fall 2020

I. Proposal

The intent of this proposal is to request a revision of the curriculum for the BS major in Information Systems Management (ISM). Changes in required courses for the ISM program curriculum include: a) deletion of three courses, including BSBA 2201, BSBA 2202, and BISM 2800 (9 credit hours will be deleted); b) add six new required courses, as described in the proposal (18 credit hours will be added); and change BISM 4300 (3 credit hours) from elective to required status.

In addition, two course numbering changes are proposed: BISM 2200 Business Information Tools will be moved from a sophomore level course to a second-semester freshman level course and will be renumbered as BISM 1500; and BISM 3200 Management Information Systems will be moved from a junior level course to a first-semester sophomore level course and will be renumbered as BISM 2000.

This curriculum proposal is being driven by the noted areas for improvement within the program as a result of the program assessment process as well as recent changes in the Accounting curriculum course offerings and changes to the general studies requirements. The current and proposed program formats can be found in Appendix A.

Description of Proposal

A. Deletion of Courses/credits from program:

Total Hours Deleted: 9 credit hours

- **Course requirements to be deleted from the program**

BSBA 2201	Principles of Accounting I	3 credit hours
BSBA 2202	Principles of Accounting II	3 credit hours

- **Course to be completely deleted from the catalog**

Deletion of BISM required course:

BISM 2800	Corporate Communications & Technology	3 credit hours

B. Addition of courses/credits to programs and total hours added:

Total Hours Added: 18 credit hours

Addition of new course requirements:

BSBA 2220	Fundamentals of Accounting	3 credit hours
BSBA 2299	SPTP: Business Communications	3 credit hours
BISM 3300	Information Systems & Data Analytics for Leaders	3 credit hours
BISM 3500	Fundamentals of SDLC Methodologies	3 credit hours
BISM 4500	Information Systems Project Planning	3 credit hours
BISM 4600	Information Assurance & Cybersecurity	3 credit hours

C. Provision for interchangeable use of course(s) with program(s): N/A

D. Revision of course content: N/A

E. Other changes to existing courses such as changes to title, course number, and elective or required status.

Change in course numbers:

Business Information Tools ~ From BISM 2200 to BISM 1500
Management Information Systems ~ From BISM 3200 to BISM 2000

Change in course status from elective to required course:

BISM 4300 Business Intelligence 3 credit hours

Total Hours Changed: 3 credit hours

Add co-requisite requirement to BISM course:

BISM 4200 Systems Analysis and Design (*refer to page 5 for explanation*)

F. Creation of new course(s).

BSBA 2220 Fundamentals of Accounting 3 credit hours
- *Being developed as part of the recently approved Accounting curriculum*

BSBA 2299 SPTP: Business Communications 3 credit hours
- *Currently being developed as a permanent BSBA course*

BISM 3300 Information Systems & Data Analytics for Leaders 3 credit hours
- *To be developed for the ISM program*

BISM 3500 Fundamentals of SDLC Methodologies 3 credit hours
- *To be developed for the ISM program*

BISM 4500 Information Systems Project Planning 3 credit hours
- *To be developed for the ISM program*

BISM 4600 Information Assurance & Cybersecurity 3 credit hours
- *To be developed for the ISM program*

G. Attach an itemized summary of the present program(s) affected, if any, and of the proposed change(s).

1. Describe how this proposal affects the hours needed to complete this program. Specifically, what is the net gain or loss in hours?

The program will still require 120 hours. The course requirements in the major area (Information Systems Management) will increase from 63 to a total of 84 hours. (There is no required minor for the proposed ISM degree.) The general studies hours are reduced from 42 to 33 credit hours (with 9 credit hours being satisfied within the major) in order to meet the newly revised university general studies requirements. The total of free elective hours has been reduced from 15 to 12 credit hours. The current and proposed program formats can be found in *Appendix A.*

The School of Business programs will be affected by the course numbering changes to the currently required BISM 2200 and BISM 3200 courses given these are both part of the business core. In addition, business core changes include requiring the Special Topics Business Communications course (currently under development as a permanent course) in place of the current BISM 2800 requirement.

The National Security & Intelligence (NSI) program currently requires the BISM 4300 Business Intelligence course. However, changes are underway to change the status from required to elective status for this course in the NSI program. Additionally, notification has been sent to the NSI program contact to explain that the BISM 3300 Information Systems & Data Analytics for Leaders which will now be the pre-requisite course for BISM 4300 is more suitable as an elective given it will cover the introductory concepts without requiring course pre-requisites.

II. Rationale for the Proposal

A. Quantitative Assessment:

Given the dynamic nature of the Information Systems Management (ISM) field, it is imperative to keep abreast of new technologies, techniques, and areas of study. The basis of proposing the data analytics-based courses for the ISM curriculum is a recognized discrepancy regarding the significant growth in demand for data analytics skills in the workforce and the lack of education and training programs available to prepare workers for these types of positions.

Over the past decade, there has been explosive growth in technology and significant volumes of data produced in essentially every field. However, Srinivasen Parthasarathy, co-director of the Ohio State University data analytics program (one of the first undergraduate programs introduced in the data analytics field), stated, "companies are generating and collecting huge amounts of data, but they lack the skills to make sense of it." He and his co-director have received many requests from colleges interested in learning more about the program because it is becoming widely recognized that there is an enormous gap between the supply and demand of data analytics skills.

There are a variety of compelling statistics regarding the data science and analytics market as presented in a report by Burning Glass, IBM, and the Business Higher Education Forum. "We project that by 2020 the number of positions for data and analytics talent in the United States will increase by 364,000 openings, to 2,720,000. In 2020, job openings for data scientists and similar advanced analytical roles will reach 61,799. This is a significant number, but it represents just 2% of the projected demand across all job roles requiring data and analytics skill." In addition, the average annual salaries for all data science and analytics positions are reported to be $80,265 and average annual salaries for analytics managers are being reported as high as $113,754 depending upon the industry sector (Markow, Braganza, Taska, Miller, & Hughes, 2017).

Higher education is being called out to be responsive through bachelors, graduate, certificate, and executive level programs in meeting the growing demands for data analytics in the workforce. "Data democratization impacts every career path, so academia must strive to make data literacy an option, if not a requirement, for every student in any field of study" (Markow, Braganza, Taska, Miller, & Hughes, 2017). In addition to a foundation in data literacy for every student, the report entitled, "The Quant Crunch: How the Demand for Data Science Skills is Disrupting the Job Market" also emphasizes the significant need for new data science and analytics education programs.

References

Markow, W., Braganza, S., Taska, B., Miller, S. M., & Hughes, D. (2017). *The Quant Crunch - How the Demand for Data Science Skills is Disrupting the Job Market.* Boston: Burning Glass Technologies.

Tate, E. (2017, March 15). *Data Analytics Programs Take Off.* Retrieved from Inside Higher Ed: https://www.insidehighered.com/digital-learning/article/2017/03/15/data-analytics-programs-taking-colleges

B. Qualitative Assessment:

The rationale for each modification in the curriculum is described as follows:

Delete BSBA 2201 and BSBA 2202 course requirements and add BSBA 2220
The Accounting program recently underwent a curriculum change and as a result, the BSBA 2201 Principles of Accounting I and BSBA 2202 Principles of Accounting II courses are being replaced with one course, BSBA 2220 Fundamentals of Accounting.

Delete BISM 2800 course requirement and add BSBA 2299
The BISM 2800 course has been taught solely by adjunct instructors since it was developed in 2010 due to a lack of faculty resources. M.E. Yancosek Gamble, current Chair for the Communications Department and faculty member within the School of Business, is currently teaching a special topics course, BSBA 2299 Business Communications. This course is intended to be proposed as a permanent course to replace the BISM 2800 requirement in the business core. M.E. has been working with the ISM faculty to incorporate requirements that will align with ISM student needs. Therefore, the ISM program will be requiring this new course to replace the current BISM 2800 course.

Add two new courses: BISM 3500 Fundamentals of SDLC Methodologies and BISM 4500 Information Systems Project Planning
The MGMT 3500 course was originally developed as an Introduction to Project Management to be used as an elective for the Management concentration. Based upon program assessment results in the past, the ISM faculty identified a need for ISM students to have a better understanding of Project Management concepts prior to taking the BISM 4800 Information Systems Project Management capstone course. Therefore, the MGMT 3500 course was previously added to the ISM curriculum as a pre-requisite for the BISM 4800 course in addition to the BISM 4200 Systems Analysis and Design pre-requisite.

Since that time, the capstone project experience has evolved such that the students are planning real-world, industry-sponsored, software development projects in the Fall term of the Senior year. These projects are then developed and delivered to the industry sponsor in collaboration with Computer Science students in the Software Engineering capstone course during the Spring semester. Recent program assessment efforts have now identified a need for both a Project Planning course prior to the BISM 4800 course as well as an introduction to systems analysis and software development life cycle methodologies course prior to the BISM 4200 course. Therefore, the BISM 3500 Fundamentals of SDLC Methodologies course and will be added as a pre-requisite to BISM 4200 Systems Analysis and Design. BISM 4500 Information Systems Project Planning will be added as a bridge course between MGMT 3500 Introduction to Project Management and BISM 4800 Information Systems Project Management capstone course.

Addition of Co-requisite Requirement for BISM 4200 Systems Analysis & Design
The proposed change to add a co-requisite requirement between ***BISM 4200 Systems Analysis and Design*** and ***BISM 4500 Information Systems Planning*** is based on the use of the same collaborative real-world, industry-sponsored, capstone project in both classes for which students will perform systems analysis, elicit project requirements, and plan the overall project.

Course Number Changes
The current curriculum and model schedule provides only one ISM class during the entire freshman year, BISM 1200 Introduction to Computing. The proposed schedule moves BISM 2200 Business Information Tools to the second semester of the freshman year. This class presents more in-depth Excel concepts as introduced in BISM 1200 in addition to the introduction of database concepts with Access. It is the most logical class to add to the second semester of the freshman year as BISM 1500 Business Information Tools.

Additionally, BISM 3200 Management Information Systems used to be a sophomore level class but was changed in 2010 to a 3000 level class due to issues with Pierpont's IS program curriculum. However, an introduction to Information Systems Management is needed earlier in the curriculum. Currently, the students are not really introduced to ISM until their junior year. Therefore, this class will be offered in the first semester of the sophomore year as BISM 2000 Management Information Systems to provide students with a better introduction to the field of study.

Addition of New Courses to be Developed
Due to the dynamic nature of technology, it is necessary to update the curriculum with new concepts as deemed important based upon the needs in industry. Currently, data analytics and cybersecurity are two of the fastest growing fields.

Data Analytics & Business Intelligence
The BISM 4300 Business Intelligence course has been offered in the past as an elective course. However, the content of this course is deemed important for all ISM students and will be added as a program requirement. In addition, based upon previous experiences teaching this course, it has been determined that students need to have a background in data analytics concepts, database concepts, and statistics to improve performance. Therefore, BISM 3300 Information Systems and Data Analytics for Leaders, BISM 3400 Database Design and Development, and BSBA 3310 Business and Economic Statistics will be added as pre-requisites to the BISM 4300 course.

Information Assurance and Cybersecurity
Information Assurance and Cybersecurity are about protecting computer-based equipment and information from unintended or unauthorized access, change, or destruction. As more and more business activities move online, it is critical that information systems managers address issues to keep the company's information and financials safe and prevent any disruption in business. The BISM 4600 Information Assurance and Cybersecurity course will provide the ISM students with necessary fundamental concepts related to information assurance and cybersecurity within a business context.

IV. Other Schools/Programs Affected by this Proposal

College/School	Dean	Signature
School of Business & Aviation	Timothy P. Otley	
College of Arts & Sciences	Chris Fast	

V. Additional Comments

- E-mail messages from the Office of the Registrar have been received by Dr. Rebecca Giorcelli to confirm approval of the proposed course numbers as indicated in the ISM proposal.

APPENDIX A

B.S. Degree in Information Systems Management
Current Program

Required Major Courses			HRS	
BSBA	2201	Principles of Accounting I	3	
BSBA	2202	Principles of Accounting II	3	
BISM	2200	Business Information Tools	3	
BISM	2400	Operating Systems Concepts	3	
BISM	2600	Introduction to Networking Administration	3	
BISM	2800	Corporate Communications & Technology	3	
BISM	3000	Business Programming Logic	3	
BISM	3200	Management Information Systems	3	
BISM	3400	Database Design and Development	3	
BISM	3600	E-Commerce and Web Development Strategy	3	
BISM	3800	Object-Oriented Business Applications	3	
BISM	4200	Systems Analysis and Design	3	
BISM	4800	Information Systems Project Management	3	
BSBA	3306	Business Law I	3	
BSBA	3310	Business and Economics Statistics	3	
BSBA	4420	Business Ethics and Corporate Accountability	3	
BSBA	2211	Principles of Macroeconomics	3	
BSBA	2212	Principles of Microeconomics	3	
BSBA	2221	Introduction to Financial Management	3	
BSBA	2204	Principles of Marketing	3	
BSBA	2209	Principles of Management	3	
MGMT	3500	Project Management	3	
MATH	1530	College Algebra (or higher MATH) ~ Outcome 2	3	
TOTAL Required Major Courses				63
Major Electives to be offered – Not required				
BISM	4300	Business Intelligence	3	
BISM	4400	Current Topics in Information Systems	3	
BISM	4900	Internship in Information Systems	3	
BISM	4998	Undergraduate Research	3	
Minor Electives			N/A	
TOTAL HOURS FOR MAJOR				**63**

Required General Studies Courses	
Attribute IA – Critical Analysis	**X**
BISM 2200	
Attribute IB – Quantitative Literacy	3
MATH 1530/1430 or higher (Satisfied in major)	
Attribute IC – Written Communication	3
ENGL 1101 (*Institutional Requirement*)	
Attribute ID – Teamwork	**X**
BSBA 2209 (Satisfied in major)	

Attribute IE – Information Literacy		3
	ENGL 1102 (*Institutional Requirement*)	
Attribute IF – Technology Literacy		3
	BISM 1200*	
Attribute IG – Oral Communication		3
	COMM 2202 (preferred) or 2200 or 2201*	
Attribute III - Citizenship		3
	Student Choice from Approved Options	
Attribute IV - Ethics		**X**
	BSBA 4420 (Satisfied in major)	
Attribute V - Health		2
	PHED 1100*	
Attribute VI - Interdisciplinary		3
	Student Choice from Approved Options	
Attribute VIIA - Arts		3
	Student Choice from Approved Options	
Attribute VIIB - Humanities		3
	Student Choice from Approved Options	
Attribute VIIC – Social Sciences		3
	BSBA 2211 (Satisfied in major)	
Attribute VIID - Natural Science		4
	Student Choice from Approved Options	
Attribute VIII – Cultural Awareness		3
	Student Choice from Approved Options	
Additional General Studies hours		**X**
	BISM 2800 (Satisfied in major) *Writing Intensive Course*	
TOTAL GENERAL STUDIES HOURS		**42**
TOTAL FREE ELECTIVES		**15**
TOTAL HOURS		**120**

**Any course(s) marked with an asterisk (*) above are recommended to complement the program curriculum; however, students may select any other courses from the approved General Studies list.*

APPENDIX A

B.S. Degree in Information Systems Management
Proposed Program

Required Major Courses			HRS	
BSBA	**2220**	**Fundamentals of Accounting**	**3**	
~~BSBA~~	~~2201~~	~~Principles of Accounting I~~	~~3~~	
~~BSBA~~	~~2202~~	~~Principles of Accounting II~~	~~3~~	
BISM	**1200**	**Introduction to Computing**	**3**	
BISM	1500	Business Information Tools (# change – from BISM 2200)	3	
BISM	2000	Management Information Systems (# change- from BISM 3200)	3	
BISM	2400	Operating Systems Concepts	3	
BISM	2600	Introduction to Networking Administration	3	
~~BISM~~	~~2800~~	~~Corporate Communications & Technology~~	~~3~~	
BSBA	**2299**	**SPTP: Business Communications**	**3**	
BISM	3000	Business Programming Logic	3	
BISM	**3300**	**Information Systems & Data Analytics for Leaders**	**3**	
BISM	3400	Database Design and Development	3	
BISM	**3500**	**Fundamentals of SDLC Methodologies**	**3**	
BISM	3600	E-Commerce and Web Development Strategy	3	
BISM	3800	Object-Oriented Business Applications	3	
BISM	4200	Systems Analysis and Design	3	
BISM	**4300**	**Business Intelligence**	**3**	
BISM	**4500**	**Information Systems Project Planning** *(ISM Capstone Experience Part 1)*	**3**	
BISM	**4600**	**Information Assurance and Cybersecurity**	**3**	
BISM	4800	Information Systems Project Management *(ISM Capstone Experience Part II)*	3	
BSBA	3306	Business Law I	3	
BSBA	3310	Business and Economics Statistics	3	
BSBA	4420	Business Ethics and Corporate Accountability	3	
BSBA	2211	Principles of Macroeconomics	3	
BSBA	2212	Principles of Microeconomics	3	
BSBA	2221	Introduction to Financial Management	3	
MGMT	3500	Introduction to Project Management	3	
BSBA	2204	Principles of Marketing	3	
BSBA	2209	Principles of Management	3	
MATH	1530	College Algebra (or higher MATH) ~ Outcome 2	3	
TOTAL Required Major Courses				~~63~~ 84
Major Electives to be offered – Not required				
~~BISM~~	~~4300~~	~~Business Intelligence~~	~~3~~	
BISM	4400	Current Topics in Information Systems	3	
BISM	4900	Internship in Information Systems	3	
BISM	4998	Undergraduate Research	3	
Minor Electives			N/A	
TOTAL HOURS FOR MAJOR				**84**

Required General Studies Courses	
Basic Skills (13 – 14 hours)	**15**
Basic Skills #1 First Year Seminar	3
BSBA 1100* Recommended	
Basic Skills #2 Written Communication	3
Student Choice from Approved Option(s)	
Basic Skills #3 Written Communication	3
ENGL 1102* Recommended	
Basic Skills #4 Oral Communication	3
COMM 2202* Recommended	
Basic Skills #5 Mathematics	X
MATH 1530/1430 or higher (Satisfied in major)	
Critical Reasoning in the Disciplines (12 – 14 hours)	**12**
Critical Reasoning in the Disciplines #6 ~ Humanities	3
Student Choice from Approved Options	
Critical Reasoning in the Disciplines #7 ~ Fine Arts	3
Student Choice from Approved Options	
Critical Reasoning in the Disciplines #8 ~ Natural Science	3
Student Choice from Approved Options	
Critical Reasoning in the Disciplines #9 ~ Social Science	X
BSBA 2211 (Satisfied in major)	
Personal Development (5 – 6 hours)	**6**
Personal Development #10 ~ Citizenship	3
Student Choice from Approved Options	
Personal Development #11 ~ Technology	X
BISM 1200 (Satisfied in major)	
TOTAL GENERAL STUDIES HOURS *(33 – 9 satisfied in the major)*	**24**
TOTAL FREE ELECTIVES	**12**
TOTAL HOURS	**120**

**Any course(s) marked with an asterisk (*) above are recommended to complement the program curriculum; however, students may select any other course from the approved General Studies list.*

Appendix B

Course number: BISM 3300
Course Title: Information Systems and Data Analytics for Leaders
Credit Hours: 3
Prerequisites: N/A
Ownership: FSU
Status: Required for Information Systems Management Majors; Elective for non-majors

Course Description for Catalog:
BISM 3300 This course provides an overview of information systems and data analytics as related to decision-making in a business context. This course is intended to be used as a breadth-first introductory course for majors and non-majors. Topics include: an overview of descriptive, predictive, and prescriptive analytics; types and sources of data; big data concepts; data visualization; strategic data-driven decision-making; and future trends and ethical considerations.

Detailed Course Outline

- Introductory Concepts ~ Information Systems and Data Analytics
  - Data Science
  - Data Analytics
  - Business Analytics
  - Business Intelligence
  - Information Systems as related to business analytics and decision-making
- Descriptive Analytics (Nature of Data and Statistical Modeling)
  - Qualitative vs quantitative
  - Mean/median/mode
  - Descriptive and inferential statistics
- Data Visualization
  - Dashboard tools and techniques
- Predictive Analytics
  - Data mining
  - Structured vs unstructured data
  - Analytics for text, web, and social media
- Prescriptive Analytics
  - Data-driven goals and decisions
- Big Data
  - Big Data concepts
  - Survey of Common Big Data Tools
- Future Trends and Ethical Considerations
  - Emerging technologies for decision-making
  - Ethics and privacy issues as related to Information Systems and Business Analytics

Outcome Competencies and Assessment Methods:

- Students will identify and define key concepts related to data analytics.
  - Assessed by chapter review quizzes, midterm, and final exam
- Students will explain the role of information systems in supporting data analytic processes for businesses.
  - Assessed by class assignments, discussions, and final exam
- Students will analyze and evaluate business analytics programs for supporting strategic decision-making.
  - Assessed by class project/case study

Course number: BISM 3500
Course Title: Fundamentals of SDLC Methodologies
Credit Hours: 3
Prerequisites: BISM 2000, BISM 3000
Ownership: FSU
Status: Required for Information Systems Management Majors

Course Description for Catalog:
BISM 3500 Systems analysis is the methodology for studying a procedure or business in order to identify its goals and purposes and create systems and procedures that will achieve them in an efficient way. In this course students will be introduced to the broad field of systems development and get a basic understanding for all the various approaches that can be taken to deploy and operate a safe, reliable, and secure system. Topics covered include the various development life cycle methodologies (with a focus on agile methodologies), requirements collection and analysis, logical and physical information flow modeling, a variety of system development methodologies, data modeling, object oriented analysis and modeling utilizing Unified Modeling Language (UML). PR: BISM 2000, BISM 3000

Detailed Course Outline

- Systems Development
    - Lifecycle Methodologies
    - Agile Development
    - Quality Management
    - Configuration Management
- Structural Methodologies
    - Data modeling
    - Business Process Modeling
    - Functional Modeling
    - Representing Requirements
- Object Oriented Methodologies
    - Object Oriented Concepts
    - Static Models and Behavior Modeling
    - UML

Outcome Competencies and Assessment Methods:

- Students will recognize Systems Analysis and Design concepts and terminology.
    - Assessed by class discussions, assignments, and exams
- Students will use a variety of data models to visualize and report on information system designs.
    - Assessed by class discussions, assignments, and exams
- Students will create a requirements document, statement of work, process model, project plan, data model, use case model, UML models, feasibility analysis and system proposal.
    - Assessed by class assignments/project

Course number: BISM 4600
Course Title: Information Assurance and Cybersecurity
Credit Hours: 3
Prerequisites: BISM 4200
Ownership: FSU
Status: Required for Information Systems Management Majors

Course Description for Catalog:
BISM 4600 This course is an introduction to information assurance and cyber security, providing a breadth of knowledge and skills that covers a wide domain. The intent is to introduce a wide-variety of topics relative to information assurance and cyber security and drill down into one specific topic to provide a basic understanding of the Risk Management Framework (RMF) as it pertains to the systems development life cycle (SDLC). Students will learn how to use this understanding during the development, management, assessment and continuous monitoring of information systems.
PR: BISM 4200

Detailed Course Outline

- Basic Information Technology Security
    - Responsibilities in protecting information and information systems (IS)
    - Social networking guidelines
    - Phishing attacks and know how to handle them securely
    - Mobile device security and best practices
    - Secure password management
    - Security aware when traveling overseas
    - Threats to IS and privacy information, including insider threat
    - Privacy and Personally Identifiable Information (PII)
- Introduction to Laws, standards, and NIST RMF
    - Driving Needs for security
    - Laws, Policies, and Regulations
    - Classified websites and classifications
    - Certifications
    - Risk management framework
    - NIST and Publications
- NIST Risk Management Framework (RMF) Overview
    - 6 steps to RMF
    - Roles and Responsibilities
    - Timelines and application to development and operations
- Data Flow Diagrams (DFDs) for Threat Modeling
    - Modeling systems using DFDs
    - Modeling systems using UML
    - Threat Modeling
    - Threat Modeling applied to DFDs and UML
- Conducting Risk Assessments, Threat and Vulnerability Assessments
    - Definition of risk
    - Process of risk assessment
    - Integration of threats
    - Vulnerability assessments
- System Security Plan
    - Purpose
    - Best Practices

    - Template and Guidance
    - Timeframes and configuration management
- Cyber Security Framework
    - Nation's Critical Infrastructure
    - Cybersecurity Framework Overview
    - Framework Core/Tiers/Profiles
    - CSF Implementation

Outcome Competencies and Assessment Methods:

- Students will learn the concepts and underlying framework of information assurance and cyber security
    - Assessed by class assignments and exams
- Students will acquire a practical understanding of the risk management framework
    - Assessed by class assignments and discussions
- Students will apply the fundamental principles of the risk management framework on an information system
    - Assessed by class assignments and class project
- Students will demonstrate the ability to present professional-quality oral presentations
    - Assessed by formal class presentations

Course number: BISM 4500
Course Title: Information Systems Project Planning
Credit Hours: 3
Prerequisites: MGMT 3500
Co-requisites: BISM 4200
Ownership: FSU
Status: Required for Information Systems Management Majors

Course Description for Catalog:
BISM 4500 This course explores best practices in project management planning with respect to technical projects. Concepts covered include Project Management Initiation and Planning process groups and relevant Knowledge Management areas as defined by the Project Management Body of Knowledge (PMBOK). Student teams apply project management tools and techniques to formally plan an information systems-related project with an emphasis on required project management documentation.
PR: MGMT 3500; Co-requisite: BISM 4200

Detailed Course Outline

- Introduction
  - Project Initiation and Planning Overview
  - Introduction to Project Proposals and Industry Sponsors
- Project Initiation
  - Project Management Methodology
  - Business Case
  - Project Selection
  - Stakeholder Register and Analysis
  - Project Charter
  - Kick-off Meeting
- Project Planning (Core Knowledge Areas)
  - Integration Management
  - Scope Management Planning
  - Schedule Management Planning
  - Cost Management Planning
  - Quality Management Planning
- Project Planning (Facilitating Knowledge Areas)
  - Resource Management Planning
  - Communications Management Planning
  - Stakeholder Management Planning
  - Risk Management Planning
  - Procurement Management Planning
- Final Project Management Plan Deliverables
  - Project Management Plan - Digital Binder
  - Final Presentation to Sponsor

Outcome Competencies and Assessment Methods:

- Students will explain the main tasks involved in and outputs of the project management process groups for initiating and planning a project
  - Assessed by chapter review quizzes and exams
- Students will demonstrate the ability to initiate and plan a collaborative information systems-related project through application of project management best practices using tools and techniques
  - Assessed by team project
- Students will demonstrate effective communications skills
  - Assessed by project stakeholder feedback, project status reporting assignments, and formal project presentations

Appendix C

Proposed Information Systems Management Program

Model Schedule

Bachelor of Science in Information Systems Management; School of Business & Aviation Model Schedule

FALL

Freshman First Semester

Credits	Type	Course
3	CC	BSBA 1100 Business Onboarding (satisfies **CORE #1** First Year Seminar)*
3	CC	ENGL 1101 Written English (satisfies **CORE #2** Written Communication)
3	ISM	MATH 1430/1530 College Algebra (satisfies **Core #5** Mathematics)
3	ISM	BISM 1200 Intro to Computing (satisfies **Core #11** Personal Development/Technology)
3	ISM	BSBA 2211 Principles of Macroeconomics (satisfies **Core #9** Social Science w/crit. thinking)
15		

Sophomore First Semester

Credits	Type	Course
3	ISM	BSBA 2220 Fundamentals of Accounting
3	ISM	BSBA 2209 Principles of Management
3	ISM	BISM 2000 Management Information Systems
3	ISM	BISM 2400 Operating Systems
3	CC	Choose from courses in **Core #10** Citizenship
15		

Junior First Semester

Credits	Type	Course
3	ISM	BISM 3000 Business Programming Logic
3	ISM	BISM 3300 Information Systems and Data Analytics for Leaders
3	ISM	BISM 3400 Database Design and Development
3	ISM	BSBA 3310 Business & Economic Statistics
3	CC	Choose course from **CORE #7** Fine Arts w/critical thinking)
15		

Senior First Semester

Credits	Type	Course
3	ISM	BSBA 3306 Business Law I
3	ISM	BISM 4200 Systems Analysis & Design
3	ISM	BISM 4500 Information Systems Project Planning
3	E	ELECTIVE
3	E	ELECTIVE
15		

**** Course is recommended for ISM majors; however student may opt to substitute another course from approved course list in Core Curriculum***

SPRING

Freshman Second Semester

Credits	Type	Course
3	CC	ENGL1102 Written English II (satisfies **CORE #3** Written Comm.)*
3	ISM	BISM 1500 Business Information Tools
3	ISM	BSBA 2212 Principles of Microeconomics
3	CC	COMM 2202 Comm in World of Work (satisfies **Core #4** Oral Comm.)*
3	CC	Choose from **Core #8** courses (Natural Science w/Critical Thinking)
15		

Sophomore Second Semester

Credits	Type	Course
3	ISM	BSBA 2221 Intro to Financial Management
3	ISM	BSBA 2204 Principles of Marketing
3	ISM	BISM 2600 Introduction to Networking Administration
3	ISM	BSBA 2XXX Corporate Communications
3	CC	Choose from courses in **Core #6** Humanities w/critical thinking
15		

Junior Second Semester

Credits	Type	Course
3	ISM	BISM 3500 Fundamentals of Systems Analysis
3	ISM	BISM 3600 E-commerce & Web Development Strategy
3	ISM	BISM 3800 Object-Oriented Business Applications
3	ISM	BISM 4300 Business Intelligence
3	ISM	MGMT 3500 Introduction to Project Management
15		

Senior Second Semester

Credits	Type	Course
3	ISM	BISM 4600 Introduction to Cybersecurity
3	ISM	BISM 4800 Information Systems Project Management
3	ISM	BSBA 4420 Business Ethics
3	E	ELECTIVE
3	E	ELECTIVE
15		

Codes	
	ISM: Information Systems Management Courses required for the degree
	CC: Core Curriculum course that satisfies Categories #1-#11 (includes some Business Core cours
	E: Free Electives of your choice; courses shown are recommendations

84	
24**	***Total needed for graduation: 120 credit hours***
12	

*** Additional 9 hours of CC met through Major requirements*