Agenda April 18, 2025

I. Information Items/Memos

Link: https://fsw.zoom.us/j/85140741270.

1	Memo	Presenter: Cristy Estes	2025-2026
Review Notes	**Summary**		
	Memorandum From: Dir. Cristy Estes To: Dr. Judith Bilsky, Vice President, Academic Affairs CC: Prof. Jeremy Pilarski, Chair, Curriculum Committee Dr. Rebecca Harris, Assistant Vice President, College Curriculum and Academic Enhancement Dr. Martin McClinton, Associate Vice President, Academic Affairs Dr. Brenda Knight, Registrar Dr. Christy Gilfert, Associate Vice President, Student Success Alex Schimel, Director of Advising Andrae Jones, Director, Student Technology and Strategy (Admissions) Jeanne Cortes, Executive Assistant to the Vice President of Academic Affairs Date: March 7, 2025 RE: Course changes to the Addictions CCC		

	Issue to be Resolved: Due to redundancy of information and continued low enrollment, the curriculum committee approved replacing HUS 2404 and HUS 2411 in the Addictions CCC with HUS 1320 and HUS 2315; both of these courses are in alignment with the state frameworks for the Addictions CCC. The current issue is that since HUS 2404 and HUS 2411 often are too low to run, current students enrolled in the Addictions CCC are waiting longer to complete the requirements. **Recommendation:** Students on the current catalog and catalogs before Fall 2023 should be able to take either/or/and HUS 1320 or HUS 2315 in place of HUS 2404 and HUS 2411. This would allow them to complete the Addictions CCC more promptly.

School	Decision	Motion	Comments
SoHP	NA		

2	Information Item	Presenter: Dr. Rebecca Harris	2025-2026

Review Notes	Summary
	Memorandum From: Dr. Brian Page, Dean, School of Arts, Humanities, and Social Sciences To: Dr. Judith Bilsky, Vice President, Academic Affairs CC: Prof. Jeremy Pilarski, Chair, Curriculum Committee Dr. Rebecca Harris, Assistant Vice President, College Curriculum and Academic Enhancement Dr. Martin McClinton, Associate Vice President, Academic Affairs Dr. Brenda Knight, Registrar Dr. Christy Gilfert, Associate Vice President, Student Success Alex Schimel, Director of Advising

Andrae Jones, Director, Student Technology and Strategy (Admissions)

Jeanne Cortes, Executive Assistant to the Vice President of Academic Affairs

Date: 15 April 2025
RE: WOH and HUM Course Descriptions

Issue to be Resolved: As a result of FSW's state-mandated general education review, new courses were proposed in World History and Humanities that were more widely offered at other FCS/SUS institutions. These courses were made equivalent to the previous FSW courses in order to allow students to pursue grade forgiveness. However, this would allow students who previously took one of the old courses to enroll in the new courses despite the fact that if they passed the previous attempt, they could not earn duplicate credit.
Recommendation: It is recommended that the following statements be added to the course descriptions for the new courses to clearly communicate to students that the courses cannot be taken for duplicate credit.

HUM 2210

This course is equivalent to HUM 2211. Students who have previously enrolled in and passed HUM 2211 may not earn duplicate credit for HUM 2210.

HUM 2230

This course is equivalent to HUM 2235. Students who have previously enrolled in and passed HUM 2235 may not earn duplicate credit for HUM 2235.

WOH 2022

This course is equivalent to WOH 1023 and 1030. Students who have previously enrolled in and passed WOH 1023 or 1030 may not earn duplicate credit for WOH 1022.

School	Decision	Motion	Comments
SoAHSS	NA		

II. Program Change

1	Program Change		2025-2026
Review Notes	**Summary**		

Curriculum Proposal Cover Sheet

FLORIDA SOUTHWESTERN STATE COLLEGE CURRICULUM

Type of Proposal: Program- Change

Department: Computer Science Department Chair/Program

Director Signature: George Kodsey

Dean Signature: Mary Myers

Curriculum Committee Approval:

Notes:

Vice President of Academic Affairs Signature:

Florida SouthWestern State College Curriculum Proposal

Type of Proposal	Program- Information Systems Technology, BAS
Department	Computer Science
Chair	Dr. George Kodsey
Dean	Dr. Mary Myers
Proposer	Dr. George Kodsey
Presenter	Dr. George Kodsey

New Program

Program Change(s)

Information Systems Technology, BAS: Program Electives; Program Learning Outcomes

Program Discontinuation(s)

Implementation Term: Fall 2026

CIP Code 11.0103

Justification

Machine Learning

As the demand for artificial intelligence (AI) and data-driven decision-making grows across industries, Florida SouthWestern State College must prepare students for careers in this rapidly evolving space. The proposed Machine

	Learning course fills a current gap in the Bachelor of Applied Science in Information Systems Technology (BAS-IST) program by providing foundational and practical knowledge in AI, specifically machine learning (ML) model development, evaluation, and deployment. With machine learning becoming central to areas like healthcare, finance, cybersecurity, and intelligent systems, students must understand how to apply algorithms to real-world data. This course equips students with theoretical understanding and hands-on implementation of ML solutions. It emphasizes data preparation, model selection, algorithm training, and performance evaluation and focuses on AI's ethical and societal implications. The course aligns with the college's General Education Competency "Evaluate" by fostering critical thinking, scientific reasoning, and moral analysis. Students will complete a capstone project using real-world datasets such as housing prices, allowing them to demonstrate their ability to build and interpret predictive models. The department fully supports this addition to the curriculum, recognizing its relevance to local workforce development and national skills trends. Faculty have noted a growing interest from students in AI/ML topics, and the course complements existing technical electives such as data visualization and programming. The proposed prerequisite, COP 3538 (Data Structures for IT), ensures students enter the course with appropriate programming and algorithmic knowledge. With this course, our students will be more competitive in the job market and better prepared for graduate studies or AI and data science certifications. **Cloud Computing** The **Cloud Computing** course is being proposed in response to the growing reliance on cloud infrastructure across virtually every industry. While the BAS-IST program currently includes courses in security, networking, and systems administration, it lacks a dedicated course that covers the full breadth of cloud computing technologies and best practices. This course is designed to introduce students to the architecture, deployment models, services, and tools used in modern cloud environments, with handson experience across platforms such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform (GCP). With businesses increasingly transitioning to cloud-native solutions, students must develop skills in cloud infrastructure, virtualization, containerization, storage, automation, and identity and access management (IAM). This course provides both theoretical foundations and practical experience, enabling students to build scalable, cost-effective, and secure cloud environments. Topics also include platform-as-a-service (PaaS), infrastructure-as-a-service (IaaS), cloud service

orchestration, disaster recovery, and compliance considerations. Students will be assessed through labs, real-world design projects, and a capstone presentation.

This course supports the FSW General Education Competency **"Evaluate"** by requiring students to assess various cloud configurations, perform risk-benefit analyses of architectural decisions, and reflect on ethical and regulatory implications in cloud deployment. The capstone project challenges students to design and evaluate a comprehensive cloud solution for a simulated organization, applying both technical and critical thinking skills.

Departmental faculty strongly support the addition of this course as a technical elective for students in the BAS-IST program. It serves as a natural progression from **CTS 2120 – Security Essentials**, ensuring that students begin with foundational cybersecurity knowledge before moving into more complex cloudbased systems. Faculty feedback and industry consultation confirm that cloud computing expertise is now a key hiring requirement for IT professionals. This course will better prepare students for certifications such as AWS Certified Solutions Architect, Microsoft Azure Administrator, or CompTIA Cloud+, and provide a competitive edge in an increasingly cloud-centric job market.

Associated Course Proposals

New Courses

CIS 3644 Cloud Computing

CAP 4612 Machine Learning

Course Change(s) Course

Discontinuation(s)

Implementation Term:

Course: CIS 2644 Cloud Computing

	Course Description	This course explores core cybersecurity principles within the context of cloud computing environments. Students will learn how to identify, assess, and mitigate risks associated with cloud infrastructure, software, and data. Topics include cloud security architecture, identity and access management (IAM), encryption, compliance, shared responsibility models, and security operations for cloud platforms such as AWS, Microsoft Azure, and Google Cloud. The course emphasizes practical application through labs and projects that simulate real-world cloud security scenarios.	

	Topic Outline	Introduction to Cloud Computing & AWS Cloud models (IaaS, PaaS, SaaS), AWS architecture overview Working with AWS Management Console & CLI Setting up an AWS account, using CLI & SDK Virtual Machines with EC2 Launching, configuring, securing, and monitoring EC2 instances Managing Elastic Block Store (EBS) Volumes, snapshots, and data persistence Storing Data with S3 Object storage concepts, versioning, lifecycle rules, static website hosting Chapter 5 Securing the Cloud: IAM Users, groups, roles, and policies; principle of least privilege Infrastructure as Code: CloudFormation Templates, stacks, and infrastructure automation Databases in the Cloud: RDS, DynamoDB Relational vs NoSQL, backups, availability Networking in AWS VPCs, subnets, security groups, route tables, NAT, and internet gateways Serverless Computing: AWS Lambda & Event-driven Architecture Load Balancing & Auto Scaling Elastic Load Balancer (ELB), Auto Scaling Groups (ASG)	

		Monitoring and Logging CloudWatch metrics, alarms, and logging Designing Resilient and Scalable Architectures High availability, fault tolerance, DR strategies Security Best Practices and Compliance Encryption, key management (KMS), shared responsibility model Capstone Project Presentations Design, deploy, and secure a cloud solution using AWS tools	

	Course Learning Outcomes	All courses at Florida SouthWestern State College contribute to the General Education Program by meeting one or more of the following General Education Competencies: **C**ommunicate clearly in a variety of modes and media. **R**esearch and examine academic and non-academic information, resources, and evidence. **E**valuate and utilize mathematical principles, technology, scientific and quantitative data. **A**nalyze and create individual and collaborative works of art, literature, and performance. **T**hink critically about questions to yield meaning and value. **I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge. **V**isualize and engage the world from different historical, social, religious, and cultural approaches. **E**ngage meanings of active citizenship in one's community, nation, and the world. **A. General Education Competencies and Course Outcomes** 1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the	

			student's general education along with the general education competency it supports. General Education Competency: **Evaluate** Evaluate cloud infrastructure for security vulnerabilities and compliance risks. Analyze incident response strategies and determine appropriate mitigation actions. Apply reasoning and industry standards to design secure cloud architectures. **B. Other Course Objectives/Standards** Explain the security risks and challenges unique to cloud computing environments. Analyze cloud security architectures and describe best practices for securing cloud infrastructure. Implement access control mechanisms using identity and access management (IAM) frameworks.	

			Apply encryption and key management techniques to protect cloud data in transit and at rest. Evaluate compliance requirements and legal considerations for securing cloud-based systems. Differentiate between the responsibilities of cloud providers and cloud consumers under the shared responsibility model. Identify common vulnerabilities and threats in cloud-based applications and services.	

		Use cloud-native tools and services to monitor, detect, and respond to security incidents. Develop secure configurations for virtual machines, storage buckets, and cloud networks. Collaborate in teams to design and present a secure cloud solution based on a real-world scenario.	

	Course Assessment Statement	Student learning in this course will be assessed through case studies, hands-on labs, quizzes, written analyses, and a final group project. These assessment methods are designed to measure student ability to analyze cloud security frameworks, evaluate risk, and apply technical solutions to complex scenarios. Assignments support the General Education Competency "Evaluate" by requiring students to critically assess cloud configurations and propose secure solutions. _____ Capstone Project (Summative Assessment): Project Title: Secure Cloud Infrastructure Design and Audit Project Description: In teams, students will design a secure cloud-based solution for a simulated organization using a cloud platform (e.g., AWS, Azure, or Google Cloud). The project includes configuration of virtual machines, secure storage, IAM roles, firewall rules, and monitoring tools. Students will conduct a security audit of their deployment, identify potential vulnerabilities, and write a report detailing the security measures implemented. Teams will also deliver a presentation justifying their design and discussing real-world compliance implications.	
	Prerequisites	CTS 2120 – Security Essentials	
	Corequisites	None	
	Credit Hours	3	
	Contact Hours	3	

Faculty Workload Hours	3
Other	

Course: CAP 4612 Machine Learning	
Course Description	This course introduces students to the principles and applications of machine learning, with a focus on solving realworld problems through algorithmic modeling and data analysis. Students will learn to work with structured datasets, design, and train machine learning models, and evaluate their performance using standard metrics. Emphasis is placed on practical implementation using Python and related ML libraries and understanding machine learning systems' ethical and societal implications.

	Topic Outline	Introduction to Machine Learning and Python ML Tools Overview of ML, AI vs ML vs DL, scikit-learn, pandas, NumPy Training Simple Models for Classification Perceptron, logistic regression, decision boundaries Model Evaluation and Hyperparameter Tuning Confusion matrix, precision, recall, k-fold crossvalidation Working with Pipelines and scikit-learn Preprocessing, building pipelines, model selection Dimensionality Reduction PCA, LDA, feature selection Regularization and Model Generalization L1/L2, overfitting, underfitting Support Vector Machines & Kernel Methods Decision Trees and Random Forests Tree-based methods, feature importance K-Means Clustering and Unsupervised Learning Silhouette score, elbow method Working with Text Data Bag of words, TF-IDF, sentiment analysis Neural Networks with TensorFlow 2 Basics of deep learning, perceptrons, activation functions Training Deep Neural Networks Backpropagation, optimization techniques	

		Convolutional Neural Networks (CNNs) Image classification, architecture design Generative Adversarial Networks (GANs) & Ethics in ML Bias, fairness, transparency Capstone Project Presentations Student presentations: Train, evaluate, and deploy an ML model	

	Course Learning Outcomes	All courses at Florida SouthWestern State College contribute to the General Education Program by meeting one or more of the following General Education Competencies: **C**ommunicate clearly in a variety of modes and media. **R**esearch and examine academic and non-academic information, resources, and evidence. **E**valuate and utilize mathematical principles, technology, scientific and quantitative data. **A**nalyze and create individual and collaborative works of art, literature, and performance. **T**hink critically about questions to yield meaning and value. **I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge. **V**isualize and engage the world from different historical, social, religious, and cultural approaches. **E**ngage meanings of active citizenship in one's community, nation, and the world. **A. General Education Competencies and Course Outcomes** 1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student's general education along with the general education competency it supports.	

			General Education Competency: **Evaluate** Analyze and evaluate machine learning models using appropriate performance metrics such as accuracy, precision, recall, and F1 score. Modify data preprocessing techniques based on the outcomes of model evaluations. Apply scientific and quantitative reasoning to test and refine hypotheses about data-driven solutions. **B. Other Course Objectives/Standards** Identify real-world problems that can be addressed using artificial intelligence (AI) and machine learning (ML) techniques. Analyze various datasets to determine their suitability for use in training AI/ML models. Design AI/ML systems that address specific problems, incorporating appropriate data sources and modeling approaches.	

			Develop machine learning models by selecting appropriate algorithms and training them using curated datasets. Evaluate the performance of AI/ML models using metrics such as accuracy, precision, recall, and F1 score. Deploy trained models in simulated or real-world environments, ensuring functionality and reliability.	

		Examine the ethical, legal, and societal implications of AI/ML technologies, including bias, fairness, and privacy concerns. Communicate technical findings and model results clearly to both technical and non-technical audiences. Collaborate effectively in team-based projects focused on AI/ML development and deployment. Reflect on the limitations of current AI/ML technologies and propose improvements or future directions.	

	Course Assessment Statement	Course Assessment Statement: Student learning will be evaluated using a combination of programming assignments, quizzes, collaborative projects, written reflections, and a capstone project. These assessments measure understanding and application of machine learning principles, programming skills, critical thinking, and ethical reasoning. Assessment tools align with course learning outcomes and support the general education competency of Evaluate, ensuring that students demonstrate proficiency in analytical thinking, quantitative analysis, and ethical considerations. _____ Capstone Project (Summative Assessment): Project Title: Housing Price Prediction with Machine Learning Description: Students will develop and deploy a machine learning model to predict housing prices using a real-world dataset (e.g., Kaggle's California Housing dataset). The project will require students to perform data cleaning, feature engineering, model training, and performance evaluation using regression metrics such as RMSE and R^2. Students will submit a detailed project report and deliver a live or recorded demonstration. The report must include an ethical analysis of the model, addressing potential bias, fairness, and data privacy concerns.	
	Prerequisites	COP 3538 – Data Structures for IT	
	Corequisites	None	
	Credit Hours	3	

Contact Hours	3
Faculty Workload Hours	3
Other	

Information Systems Technology, BAS

Purpose

The Bachelor of Applied Science in Information Systems Technology (BAS ISTC) is designed to prepare graduates for higher level employment in Information Technology management in areas such as systems programming, systems design and architecture, network security, and help desk support services. The program also provides the professional development necessary to help meet the growing regional demand for skilled Information Technology workers in Southwest Florida. This degree is specifically designed to provide a career and educational pathway particularly for graduates from Florida SouthWestern State College's Associate in Science in Computer Programming and Analysis and/or the Associate in Science in Network Systems Technology. Program Outcomes

1. Author effective visual, oral and written communication for a range of audiences.
2. Identify and evaluate organizational requirements and current and emerging technologies.
3. Apply problem solving skills, core IT concepts, best practices and standards to information technologies.
4. Implement databases effectively.
5. Demonstrate an ability to participate effectively in the planning and execution of team projects.
6. Apply ethical practices in professional activities.
7. Create and install software packages (Programming Track).
8. Identify security issues and the implementation methods to secure information

Admission Requirements

	1. Applicants must complete the Bachelor's Degree admissions application online, pay the $30.00 application fee, and be accepted to Florida SouthWestern State College. Official transcripts from all previously attended colleges or universities must be sent directly to the Office of the Registrar. Students are encouraged to apply for admission during the term in which they will complete their Associate degree program. 2. Applicants must have earned: An Associate in Science degree from a regionally accredited college or university, as defined by State Board of Education rule, with a minimum of 60 credit hours, **OR** An Associate in Arts degree from a regionally accredited college or university, as defined by State Board of Education rule, with a minimum of 60 credit hours, **OR** A minimum of 60 credit hours from a regionally accredited college or university, as defined by State Board of Education rule, with all State of Florida general education core requirements met. 3. Applicants must have a minimum cumulative grade point average of 2.0 on a 4.0 scale. Note: Applicants not meeting stated admission criteria may petition for program admittance if they feel there are mitigating circumstances. Applicants must submit an official petition form to the Office of the Admissions. Note: Students may demonstrate proficiency in some or all required Additional Lower Division Requirements by presenting proof of current and appropriate industry certification according to FSW's most current Gold Standard list. Articulation credit may also be awarded for some or all industry certifications subject to individual evaluation. Requirements to Enroll in Baccalaureate Courses

	1. Upon admission to the BAS program, students must attend a required orientation session prior to enrollment in Upper Division (3000 and 4000 level) Program Requirements. 2. Students must complete ENC 1101 - Composition I, ENC 1102-Composition II or ENC 2210 - Technical Communication, and three credit hours of approved mathematics, all with a grade of "C" or better, prior to enrollment in any Upper Division (3000 or 4000 level) Program Requirements. (Refer to the General Education Program Guide) 3. Students must complete MAN 2021-Management Principles, during the **first term** of enrollment if not previously completed. 4. Cross-enrollment approval: Students must obtain prior approval to cross enroll (as a transient student) in courses intended to fulfill program requirements. Approval will be determined by the appropriate dean in collaboration with program faculty. Students initiate this process using Florida Virtual Campus: www.floridashines.org/. 5. Students who have not fulfilled the State of Florida General Education Core requirements must complete them. Students who transfer to Florida SouthWestern State College with an Associate in Arts degree from a Florida College or baccalaureate degree from a regionally accredited institution are considered to have met the General Education component of the degree. Students who have previously earned an Associate in Arts or a baccalaureate degree from a college or university outside the State of Florida will be reviewed on a case-by-case basis to determine which courses will meet the 36-hour General Education Requirements. Students must have earned equivalent credit hours in each General Education category. 6. Students are permitted to complete remaining General Education and Lower Division Requirements while enrolled in the BAS program. However, prior to enrollment in CIS 4891 - Senior Capstone Project, students must have completed all General Education Requirements and 36 credit hours of Upper Division Program Requirements. The capstone course must be taken at Florida SouthWestern State College and is not eligible for cross-enrollment. Graduation Requirements 1. Students must fulfill all specific degree requirements of the program to be eligible for graduation. 2. Students must satisfactorily complete a minimum of 120 credit hours as outlined in the Information Systems Technology, BAS program of study.

	3. To satisfy residency requirements, a minimum of 15 credit hours of Upper Division Program Requirements and a minimum of 30 total credit hours must be completed at Florida SouthWestern State College. 4. Students must earn a minimum cumulative grade point average of 2.0 or higher on a 4.0 scale. 5. Students must earn a grade of "C" or better in all Upper Division (3000 or 4000 level) Program Requirements. 6. Students must complete the State of Florida General Education Core Requirements, including any assessment of General Education outcomes required by the College. Transfer courses will be reviewed for equivalency. Students who transfer to Florida SouthWestern State College with an Associate in Arts degree from a Florida College or a baccalaureate degree from a regionally accredited institution are considered to have met the General Education component of the degree. 7. Students must complete the State Civic Literacy Competency Requirement which is met by achieving a passing score on the Florida Civic Literacy Exam and by successfully passing a civic literacy course. 8. Student must successfully complete 12 semester hours of coursework demonstrating college level writing skills with a grade of "C" or better in order to meet the Writing Intensive Requirement. Six (6) credit hours must be taken in English Composition and six (6) credit hours must be taken in additional coursework that demonstrates collegelevel writing skills. 9. Students must satisfy the State Foreign Language Competency Requirement which is met by completing one of the following: · 2 years of the same High School Foreign Language, or · Documented foreign language proficiency through testing (for example, CLEP), or · 2 semesters of the same College Level Foreign Language (Level II proficiency). · Presentation of a valid non-English high school diploma (including but not limited to students who have earned a GED in Spanish or French) or higher credential from a foreign country. · • Successful completion (grade of “C” or better) of any required English for Academic Purposes (EAP) course as determined by placement testing.

	· • A minimum of 8 college level transfer credits earned at a postsecondary institution where the primary language of instruction is not in English. **Students who have completed the second level of a foreign language course or higher with a grade of 'D' or better during high school have satisfied the foreign language requirement. Students may take high school courses as early as the sixth grade. If a course is on the student's high school transcript upon admission, it is considered a high school course. Note: Students who wish to participate in the Commencement Ceremony must indicate their intention to attend the Commencement Ceremony by completing the Commencement Application by the published deadline. Course Prerequisites **Some courses may require prerequisites.** Check the description of each course in the list below for prerequisites, minimum grade requirements, and other restrictions. Students must complete all prerequisites for a course prior to registering for it. **Lower Division Requirements** **General Education Requirements (36 Credit Hours)** **Refer to the FSW General Education Program Guide.** **Additional Lower Division Requirements** **Common Lower Division Requirements (12 Credit Hours)** ● CTS 1131 - Computer Hardware **3 credits** ● CTS 1133 - Computer Software **3 credits** ● CGS 1100 - Computer Applications for Business **3 credits** ● MAN 2021 - Management Principles **3 credits**

Choose one track (Networking or Programming)

Networking Lower Division Track (12 Credit Hours)

- CNT 1000 - Computer Networking Essentials **3 credits**
- CTS 2120 - Computer and Network Security (Security+) **3 credits**
- CIS 2321 - Systems Analysis and Design **3 credits**
- CTS 2142 - Introduction to Project Management **3 credits**

OR

MAN 2582 - Project Management **3 credits**

Programming Lower Division Track (12 Credit Hours)

- COP 1000 - Introduction to Computer Programming **3 credits**
- COP 2360 - C# Programming I **3 credits**
- COP 2362 - C# Programming II **3 credits**
- COP 2700 - Database Programming **3 credits**

Upper Division Program Requirements: 42 Credit Hours

Upper Division Core Requirements (24 Credit Hours)

- ISM 3004 - Information Resources Management for Business **3 credits**
- ISM 3113 - Systems Analysis and Design **3 credits**
- MAN 4701 - Business Ethics and Society **3 credits**
- ISM 4323 - Information Security Policy Administration **3 credits**
- CIS 4523 - Managing IT Projects **3 credits**
- CTS 4408 - Database Administration **3 credits**
- ISM 4153 - Enterprise Information Systems **3 credits**
- CIS 4891 - Senior Capstone Project **3 credits**

Upper Division Specialization Track Requirements (18 Credit Hours)

Choose one track (Networking or Programming)

Networking Upper Division Track (18 Credit Hours)

- CET 4505 - Computer Operating Systems **3 credits**
- CNT 3504 - Computer Networks and Distributed Processing **3 credits**
- CIS 3360 - Principles of Security **3 credits**
- CIS 3361 - Information Technology Security Management **3 credits**
- CNT 4514 - Wireless Networks and Portable Devices **3 credits**
- CNT 4524 - Mobile Security **3 credits**

OR

CIS 3644 Cloud Computing

Programming Upper Division Track (18 Credit Hours)

- COP 3505 - Intermediate Computer Programming **3 credits**
- COP 3804 - Intermediate Java Programming **3 credits**
- CEN 4330 - Advanced Database Development **3 credits**
- COP 3655 - Application Development for Mobile Devices **3 credits**
- COP 4807 - Web Application Programming **3 credits**
- COP 3538 - Data Structures for IT **3 credits**

Additional Program Requirements

- Additional credit hours from courses numbered 1000-4999 with a CAP, CIS, CNT, CEN, CET, COP, CGS, CTS, MAN, or ISM prefix.

Total Degree Requirements: 120 Credit Hours

Information is available online at: www.fsw.edu/academics or on the School of Business and Technology Home Page at: www.fsw.edu/sobt.

School	Decision	Motion	Comments
SoBT	NA		