

Curriculum Committee



Change of Program or Certificate Proposal

Note required information: Program or certificate changes require a change to the catalog page. All change of program or certificate proposals must include the new catalog page, with all proposed changes, at the end of this document. All changes that affect the courses, words, numbers, symbols, program description, admissions requirements, and graduation requirements must be documented. Note before completing this proposal that all new courses and current prerequisite, co-requisite, core, or elective courses changes must have already been reviewed (or submitted for the same meeting) by the Curriculum Committee and approved by the Provost. The Track Changes feature in Word must be used to illustrate all changes to the catalog page.

School or Division	School of Business and Technology
Program or Certificate	BAS – Information Systems Technology
Proposed by (faculty only)	Mary Myers, Melinda Lyles, Deborah Johnson, George Kodsey, Roger Webster
Presenter (faculty only)	Mary Myers
Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or the proposal will be returned to the School or Division and be resubmitted for a later date.	
Submission date	3/19/2020
All Curriculum proposals require approval of the Curriculum Committee and the Provost. Final approval or denial of a proposal is reflected on the completed and signed proposal.	
<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
_____ Curriculum Committee Chair Signature	_____ Date
_____ Curriculum Committee Chair Signature	_____ Date
<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Do Not Approve	
_____ Provost Signature	_____ Date
All Curriculum proposals require review by the Office of Accountability & Effectiveness.	
<input checked="" type="checkbox"/> Reviewed	
_____ Office of Accountability & Effectiveness Signature	_____ Date

Section I, Important Dates and Endorsements Required

NOTE: Course and Program changes must be submitted by the dates listed on the published Curriculum Committee Calendar. Exceptions to the published submission deadlines must receive prior approval from the Provost' Office.

Term in which approved action will take place	Fall 2021
Provide an explanation below for the requested exception to the effective date.	

Any exceptions to the term start date requires the signatures of the Academic Dean and Provost prior to submission to the Dropbox.		
Dean	Signature	Date
Provost	Signature	Date
Dr. Eileen DeLuca		

Required Endorsements	Type in Name	Select Date
Department Chair or Program Coordinator/Director	Mary Myers	3/17/2020
Academic Dean or Provost	Dr. Debbie Psihountas	3/17/2020

List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).
Mary Myers, Melinda Lyles, Deborah Johnson, George Kodsey, Roger Webster

Section II, Proposed Changes

Do any of the changes affect the AA focus? (If so, a Change of Program proposal is also needed.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Have the deans of the General Studies been contacted/consulted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Have you attached an updated catalog page?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Change of School, Division, or Department	
Change to program or certificate name	
<p>List below, any changes to the program or certificate prerequisites. Include course titles and credits if applicable.</p>	
<p>Students who do not hold an Associate in Science in Computer programming must complete the following coursework before enrolling in upper level Core classes (these courses may be used to satisfy elective requirements):</p> <ul style="list-style-type: none"> • COP 1000 Introduction to Computer Programming • COP 1822 Internet Programming HTML • CNT 1000 Computer Networking Essentials • CNT 1512 Wireless Network Administration • CGS 2108 Computer Applications with Flowcharting <u>or</u> CGS 1100 Computer Applications for Business • COP 2800 Java Programming • COP 2823 Advanced Microsoft Web Development <u>or</u> COP 2830 Internet Programming HTML II • 6 credits of a programming language sequence in Visual Basic, C++, or C#. <p>Students may demonstrate proficiency in some or all of the above coursework by presenting proof of current and appropriate industry certification according to FSW's most current <i>Gold Standard</i> list. Articulation credit may also be awarded for some or all of these industry certifications subject to individual evaluation.</p> <p>ADDITIONAL LOWER DIVISION PROGRAM REQUIREMENTS: MINIMUM OF 42 CREDIT HOURS <u>Common Lower Division Requirements (9 hours)</u></p>	

- CTS1131 – Computer Hardware 3 credits**
- CTS1133 – Computer Software 3 credits**
- CGS 2108 - Computer Applications with Flowcharting 3 credits **

or

- CGS 1100 - Computer Applications for Business 3 credits **
- MAN 2021 - Management Principles 3 credits *

Networking Concentration Lower Division Requirements (9 hours)

- CNT 1000 - Computer Networking Essentials 3 credits **
- CNT 1512 - Wireless Network Administration 3 credits **
- CTS2120 – Computer and Network Security 3 credits**

Programming Concentration Lower Division Requirements (9 hours)

- COP 1000 - Introduction to Computer Programming 3 credits **
- A programming language sequence in Visual Basic, C++, or C# - 6 credits **

**Students may demonstrate proficiency in some or all of the above coursework 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 of these industry certifications subject to individual evaluation.

List below, any changes to the General Education requirements. Include course titles and credits if applicable.

~~Required Core Communication General Education Courses~~

- ~~ENC 1101 – Composition I 3 credits , writing intensive – must complete with a "C" or better~~
- ~~ENC 1102 – Composition II 3 credits , writing intensive – must complete with a "C" or better~~
- ~~SPC 1017 – Fundamentals of Speech Communication 3 credits~~
- ~~or~~
- ~~SPC 2608 – Introduction to Public Speaking 3 credits~~

~~Humanities Category: 6 Credits Required~~

- ~~Core Humanities General Education course – 3 credits , writing intensive – must complete with a "C" or better~~
- ~~PHI 2100 – Introduction to Logic 3 credits (recommended)~~
- ~~or~~

<ul style="list-style-type: none"> • PHI 2103 Critical Thinking 3 credits • or • PHI 2600 Ethics 3 credits <p>Social Sciences Category: 9 Credits Required</p>
<ul style="list-style-type: none"> • Writing Intensive Social Sciences course, must pass with a "C" or better 3 credits • PSY 2012 Introduction to Psychology 3 credits • ECO 2013 Principles of Macroeconomics 3 credits <p>Mathematics Category: 6 Credits Required</p>
<ul style="list-style-type: none"> • STA 2023 Statistical Methods I 3 credits • MAC 1140 Pre-Calculus Algebra 3 credits <p>Natural Sciences Category: 6 Credits Required</p>
<ul style="list-style-type: none"> • Core Natural Sciences General Education course with corresponding laboratory 3 credits • Any Natural Sciences General Education course with corresponding laboratory 3 credits <p>Additional Lower Division Program Requirements: minimum of 36 Credit Hours UPDATE GENERAL EDUCATION COURSES: 36 CREDITS Refer to the FSW General Education Program Guide</p>
<p>Communications Category: 9 Credits Required Required Core Communication General Education Courses</p> <ul style="list-style-type: none"> • ENC 1101 - Composition I 3 credits , writing intensive - must complete with a "C" or better • ENC 1102 - Composition II 3 credits , writing intensive - must complete with a "C" or better • Additional Communication General Education Course - 3 credits
<p>Humanities Category: 6 Credits Required</p> <ul style="list-style-type: none"> • Core Humanities General Education course - 3 credits • Writing Intensive Humanities course, must pass with a "C" or better - 3 credits
<p>Social Sciences Category: 9 Credits Required</p> <ul style="list-style-type: none"> • Writing Intensive Social Sciences course, must pass with a "C" or better - 3 credits • Core Social Sciences General Education Course (Recommended: ECO 2013, Principles of Macroeconomics) - 3 credits • Any Social Sciences General Education Course (Recommended: ECO 2023, Principles of Macroeconomics) - 3 credits

Mathematics Category: 6 Credits Required (STA2023 and MAC1105 suggested)

Must pass Math courses with a "C" or better

- Core Mathematics General Education Course *** - 3 credits
- Any Mathematics General Education Course - 3 credits

Natural Sciences Category: 6 Credits Required

- Core Natural Sciences General Education course with corresponding laboratory - 3 credits
- Any Natural Sciences General Education course with corresponding laboratory - 3 credits

List below, any changes to the program or certificate Core requirements. Include course titles and credits if applicable.

FROM

Baccalaureate Core Program Requirements: 48 Credit Hours

- ~~CET 4505 – Computer Operating Systems 3 credits~~
- ~~COP 3337 – Intermediate Programming (C++) 3 credits~~
- ~~COP 3338 – Advanced C++ Programming 3 credits~~
- ~~COP 3655 – Application Development for Mobile Devices 3 credits~~
- ~~COP 4807 – Web Application Programming 3 credits~~
- ~~CGS 4183 – Web Design for E-Commerce 3 credits~~
- ~~CIS 4891 – Senior Capstone Project 3 credits *~~
- ~~CNT 3504 – Computer Networks and Distributed Processing 3 credits~~
- ~~CNT 4514 – Wireless Networks and Portable Devices 3 credits~~
- ~~CNT 4524 – Mobile Security 3 credits~~
- ~~CTS 4408 – Database Administration 3 credits~~
- ~~ISM 3113 – Systems Analysis and Design 3 credits~~
- ~~ISM 4220 – Distributed Information Systems 3 credits~~
- ~~ISM 4323 – Information Security Policy Administration 3 credits~~
- ~~ISM 4480 – Principles of Electronic Commerce 3 credits~~
- ~~MAN 3504 – Operations and Supply Chain Management 3 credits~~

UPDATE:

BACCALAUREATE CORE PROGRAM REQUIREMENTS: 48 CREDIT HOURS

Core Requirements (24 hours)

- ISM 3004 – Information Resources Management for Business **3 credits**
- ISM 3113 – Systems Analysis and Design **3 credits**
- ISM 4153 – Enterprise Information Systems **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**
- CIS 4891 – Senior Capstone Project **3 credits***

Networking Concentration (18 hours)

- CET 4505 - Computer Operating Systems **3 credits**
- CNT 3504 - Computer Networks and Distributed Processing **3 credits**
- CIS3360 – Principles of Security **3 credits**
- CIS3361 – Information Technology Security Management **3 credits**
- CNT 4514 - Wireless Networks and Portable Devices **3 credits**
- CNT 4524 - Mobile Security **3 credits**

Programming Concentration (18 hours)

- COP3035 – Intermediate Computer Programming **3 credits**
- COP3804 – Intermediate Java Programming **3 credits**
- CEN4333 – 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**

From:

List below, any changes to the program or certificate Elective requirements. Include course titles and credits if applicable.

Electives – Upper Level (6 hours)

Any CIS, CNT, CEN, CET, COP, CGS, CTS, CAP, MAN, ISM courses at 3000 or 4000 level.

List below, any other changes to the program or certificate requirements.	
Change to program length (credits or clock hours to complete)	From: To:

Include complete new catalog page as an attachment. Proposals without the new catalog page will not be reviewed by the committee.

Section III, Justification for proposal

Include state frameworks, accrediting or professional organization recommendations or requirements, workforce data, and/or crosswalks.

Provide justification (below) for each change on this proposed curriculum action.
The Florida Department of Education was concerned with the degree as originally proposed. It was structured so that AS Networking and AS Programming students had too many lower division courses to complete before beginning the program. By creating concentrations, students from both AS degrees have clear paths into the degree. The Computer Science AS advisory board approved of the change in structure.

Information Systems Technology, BAS

(Enrollment in this program is pending approval from FLDOE and SACSCOC)

Purpose

The Bachelor of Applied Science in Information Systems Technology program 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 Structure

The BAS in Information Systems Technology program includes courses in information systems management, computer programming, computer networking, information security, e-commerce, mobile application development, and business. Elective choices include additional courses in management, information technology, and entrepreneurship, and marketing. Courses are offered in on campus, online or blended formats, with many courses offered in an accelerated eight-week fashion, to accommodate students' various schedules and learning preferences.

Degree Requirements: 120 Credit Hours

General Education Core Requirements: minimum of 36 Credit Hours

Additional Lower Division Program Requirements: minimum of 36 Credit Hours

Baccalaureate Program Requirements: 48 Credit Hours

Admission Requirements

1. Applicants must apply for admission 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.
2. Applicants must have a minimum cumulative grade point average of 2.0 on a 4.0 scale.
3. Applicants must have earned an:
Associate in Science degree from any regionally accredited college or university, as defined by State Board of Education rule, with a minimum of 60 credit hours,

OR

Associate in Arts degree from any 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 any regionally accredited college or university, as defined by State Board of Education rule, with all state of Florida general education core requirements met.

4. Students are encouraged to apply for admission during the term in which they will complete their Associate degree program.
5. 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.
6. Applicants must apply for admission 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.
7. Applicants must have a minimum cumulative grade point average of 2.0 on a 4.0 scale.
8. Students may demonstrate proficiency in some or all of the required lower division coursework 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 of these industry certifications subject to individual evaluation.
9. Students are encouraged to apply for admission during the term in which they will complete their Associate degree program.
10. 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.

Requirements to Enroll in Baccalaureate (3000 or 4000) Courses

1. Upon admission to the BAS program, students must attend a required orientation session prior to enrollment in baccalaureate courses.
2. Students must complete ENC 1101 - Composition I , ENC 1102 - Composition II , and three credit hours of approved mathematics prior to enrollment in any baccalaureate courses (3000 or 4000 level) with a grade of C or higher. (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. Students must meet program criteria, defined below, prior to enrollment in CIS 4891, Senior Capstone Project. CIS 4891 must be completed through Florida SouthWestern State College and is not eligible for cross-enrollment.
5. Cross-enrollment approval: Baccalaureate degree seeking students must obtain prior approval to cross enroll (as a transient student) in courses intended to fulfill baccalaureate 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/.

6. 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 a previous Associate in Arts degree from a Florida community college or Baccalaureate degree from a regionally accredited institution are considered to have met the General Education component of the degree. Students are permitted to complete remaining general education courses while enrolled in the BAS program. However, prior to enrollment in CIS 4891 - Senior Capstone Project, students must have all general education courses completed and must have completed 39 core upper level credit hours
7. 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 (i.e., 6 hours of Humanities, 9 hours of Social Sciences, etc.).

Students are permitted to complete remaining general education courses while enrolled in the BAS program. However, prior to enrollment in CIS 4891 - Senior Capstone Project, students must have all general education courses completed. Students must have completed 39 core upper level credit hours prior to enrollment in the capstone course. The capstone course must be taken at Florida SouthWestern State College.

Graduation Requirements

1. Students must satisfactorily complete 120 credit hours to be eligible for graduation. For residency purposes, a minimum of 15 baccalaureate (3000 or 4000 level) program credit hours required for graduation must be completed at Florida SouthWestern State College. All other specific degree requirements must also be met. Credit awarded for Developmental Studies instruction may not be applied toward the total number of credits required for residency purposes or graduation.
2. Students must complete the State of Florida General Education Core Requirements, including any assessment of General Education outcomes that are required by the College. Transfer courses will be reviewed for equivalency. Students who transfer to Florida SouthWestern State College with a previous 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.
3. The Foreign Language Competency Requirement may be met by:
 - 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),
4. Students must fulfill all requirements of their program major.
5. Students must achieve a cumulative grade point average of 2.0 or higher on a 4.0 scale.

6. Students must earn a grade of C or higher in all baccalaureate (3000 or 4000 level) program requirements.
7. Students must indicate their intention to attend commencement ceremony, by completing the Commencement Form by the published deadline.

Many courses require prerequisites. Check the description of each course in the list below to check for prerequisites, minimum grade requirements, and other restrictions related to the course. Students must complete all prerequisites for a course prior to registering for it.

GENERAL EDUCATION COURSES: 36 CREDITS

Refer to the FSW General Education Program Guide

Communications Category: 9 Credits Required

Required Core Communication General Education Courses

- ENC 1101 - Composition I **3 credits** , writing intensive - must complete with a "C" or better
- ENC 1102 - Composition II **3 credits** , writing intensive - must complete with a "C" or better
- Additional Communication General Education Course - **3 credits**

Humanities Category: 6 Credits Required

- Core Humanities General Education course - **3 credits**
- Writing Intensive Humanities course, must pass with a "C" or better - **3 credits**

Social Sciences Category: 9 Credits Required

- Writing Intensive Social Sciences course, must pass with a "C" or better - **3 credits**
- Core Social Sciences General Education Course (Recommended: ECO 2013, Principles of Macroeconomics) - **3 credits**
- Any Social Sciences General Education Course (Recommended: ECO 2023, Principles of Microeconomics) - **3 credits**

Mathematics Category: 6 Credits Required (STA2023 and MAC1105 suggested)

Must pass Math courses with a "C" or better

-
- Core Mathematics General Education Course - **3 credits**
 - Any Mathematics General Education Course - **3 credits**

Natural Sciences Category: 6 Credits Required

- Core Natural Sciences General Education course with corresponding laboratory - **3 credits**
- Any Natural Sciences General Education course with corresponding laboratory - **3 credits**

ADDITIONAL LOWER DIVISION PROGRAM REQUIREMENTS: MINIMUM OF 42 CREDIT HOURS

Common Lower Division Requirements (12 hours)

- CTS1131 – Computer Hardware **3 credits****
- CTS1133 – Computer Software **3 credits****
- CGS 2108 - Computer Applications with Flowcharting **3 credits ****

or

- CGS 1100 - Computer Applications for Business **3 credits ****
- MAN 2021 - Management Principles **3 credits ***

Networking Concentration Lower Division Requirements (15 hours)

- CNT 1000 - Computer Networking Essentials **3 credits ****
- CNT 1512 - Wireless Network Administration **3 credits ****
- CTS2120 – Computer and Network Security **3 credits****
- CIS2321 – Systems Analysis and Design **3 credits****
- CTS2142 OR MAN2582– Principles of Project Management **3 credits****

Programming Concentration Lower Division Requirements (27 hours)

- COP 1000 - Introduction to Computer Programming **3 credits ****
- A programming language sequence in Visual Basic, C++, or C# - **6 credits ****
- COP2800 - Java Programming **3 credits ****
- COP2700 - Database Programming **3 credits ****
- COP1822 - Internet Programming HTML I **3 credits ****
- COP2830 - Internet Programming HTML II **3 credits ****

Electives

- Any CIS, CNT, CEN, CET, COP, CGS, CTS, CAP, MAN, ISM courses. **9 to 15 credits**
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Note: Students who are transferring one or more of the above courses may choose their electives from any 1000-4999 course.

- *Must be completed within the first term of enrollment if not completed prior to admission
 - **Must be completed before enrolling in upper level Core classes. Articulation credit may be awarded for some or all of this coursework if the student holds current industry certifications (subject to individual evaluation).
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BACCALAUREATE CORE PROGRAM REQUIREMENTS: 42 CREDIT HOURS

Core Requirements (24 hours)

- ISM 3004 – Information Resources Management for Business **3 credits**
- ISM 3113 – Systems Analysis and Design **3 credits**
- ISM 4153 – Enterprise Information Systems **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**
- CIS 4891 – Senior Capstone Project **3 credits***

Networking Concentration (18 hours)

- CET 4505 - Computer Operating Systems **3 credits**
- CNT 3504 - Computer Networks and Distributed Processing **3 credits**
- CIS3360 – Principles of Security **3 credits**
- CIS3361 – Information Technology Security Management **3 credits**
- CNT 4514 - Wireless Networks and Portable Devices **3 credits**
- CNT 4524 - Mobile Security **3 credits**

Programming Concentration (18 hours)

-
- COP3035 – Intermediate Computer Programming **3 credits**
 - COP3804 – Intermediate Java Programming **3 credits**
 - CEN4333 – 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**

*CIS 4891 Senior Capstone Project, required final course, must be taken after successful completion of 39 program credits (Core Requirements/Concentration) and must be completed at Florida SouthWestern State College. It is strongly recommended to be taken with no more than one other course from the degree core list above.

All courses at the 3000 and 4000 level must be passed with a “C” or better.

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 .

Information Systems Technology BAS: Programming Concentration

<p align="center">General Education</p> <p>General Education (36 Hours) Foreign Language (Varies)</p>	<p align="center">Open Electives (9 Hours)</p> <p>Approved Electives 1000 - 4999 Any CIS, CNT, CEN, CET, COP, CGS, CTS, CAP, MAN, ISM courses</p>	<p align="center">Lower Division Core (33 Hours)</p> <p>CTS1131 - A+ Hardware CTS1133 - A+ Software</p> <p>CGS1100 - Computer Applications for Business MAN2021 - Management Principles COP1000 - Introduction to Computer Programming A programming language sequence 6 credits COP2800 - Java Programming COP2700 - Database Programming COP1822 - Internet Programming HTML I COP2830 - Internet Programming HTML II</p>
<p align="center">Upper Division Core Admittance (12 Hours)</p> <p>ISM3004 - Information Resources Management for Business ISM3113 - Systems Analysis and Design ISM4153 - Enterprise Information Systems MAN4701 - Business Ethics and Society</p>		
<p align="center">Upper Division Core Requires Lower Level Prerequisites (9 Hours)</p> <p>ISM4323 - Information Security Policy Administration (MAN2021) CIS4523 - Managing IT Projects (MAN2021) CTS4408 - Database Administration (CGS1100)</p>	<p align="center">Upper Division Concentration Requires Lower Level Prerequisites (15 Hours)</p> <p>COP3035 - Intermediate Computer Programming (6 hours programming sequence) COP3804 - Intermediate Java Programming (COP2800) CEN4333 - Advanced Database Development (COP2700) COP3655 - Application for Mobile Development (6 hours programming sequence) COP3538 - Data Structures for IT (COP2800 or COP2360)</p>	<p align="center">Upper Division Concentration Requires Upper Level Prerequisites (6 Hours)</p> <p>COP4807 - Web Application Programming (CEN4333) CIS4891 - Capstone Project (39 3000/4000 Credits)</p>

Information Systems Technology BAS: Networking Concentration

<p align="center">General Education</p> <p>General Education (36 Hours) Foreign Language (Varies)</p>	<p align="center">Open Electives (15 Hours)</p> <p>Approved Electives 1000 - 4999</p> <p>Any CIS, CNT, CEN, CET, COP, CGS, CTS, CAP, MAN, ISM courses</p>	<p align="center">Lower Division Core (27 Hours)</p> <p>CTS1131 - A+ Hardware CTS1133 - A+ Software</p> <p>CNT1000 - Computer Networking Essentials CGS1100 - Computer Applications for Business CTS1512 - Wireless Network Administration CIS2321 - Systems Analysis and Design CTS2120 - Computer Network & Security MAN2021 - Management Principles CTS2142 - Principles of Project Management OR MAN2582 - Principles of Project Management</p>
<p align="center">Upper Division Core Admittance (12 Hours)</p> <p>ISM3004 - Information Resources Management for Business ISM3113 - Systems Analysis and Design ISM4153 - Enterprise Information Systems MAN4701 - Business Ethics and Society</p>		
<p align="center">Upper Division Core Requires Lower Level Prerequisites (9 Hours)</p> <p>ISM4323 - Information Security Policy Administration (MAN2021) CIS4523 - Managing IT Projects (MAN2021) CTS4408 - Database Administration (CGS1100)</p>	<p align="center">Upper Division Concentration Requires Lower Level Prerequisites (12 Hours)</p> <p>CNT3504 - Computer Networks and Distributed Processing (CNT1000) CET4505 - Computer Operating Systems (CNT1000) CIS3360 - Principles of Security (CTS2120) CNT4514 - Wireless Networks and Portable Devices (CNT1000 & CTS1512)</p>	<p align="center">Upper Division Concentration Requires Upper Level Prerequisites (9 Hours)</p> <p>CIS3361 - Information Technology Security Management (CIS3360) CNT4524 - Mobile Security (CNT4514) CIS4891 - Capstone Project (39 3000/4000 Credits)</p>