B.A.A.S. INFORMATION TECHNOLOGY

OVERVIEW

The Bachelor of Applied Arts and Sciences (BAAS) Information Technology is generally a transfer pathway for students with an Associate of Applied Science degree. Students may complete the program by obtaining credit for the relevant program coursework, up to 36 hours, for certifications, non-academic training in the field, and industry training.

Program Student Learning Outcomes

- Demonstrate proficiency in written communications on technical subjects appropriate to the discipline.
- Recognize a reasoned resolution to an ethical challenge in computing context
- Design appropriate computing solutions to business problems
- Apply knowledge to address the IT security needs of an organization
- Demonstrate knowledge proficiency in the area of concentration: Networking Management, Software Engineering Database Design, Cybersecurity, Data Analytics

Program Requirements

The program allows students to apply up to 36 semester credit hours of related technical, vocational, or military education and training as the foundation of their occupational specialization in the degree program. To qualify for the program, a minimum of 12 semester credit hours (technical/vocational/military courses) in an occupational specialization area (OSA) is required to qualify for the program. Academic coursework may be taken to meet the 36 semester credit hour requirement, but coursework must be directly related to the area of specialization or business.

Occupational Specialization

Military Education

All military evaluated credit, based on ACE recommendations, designated as lower level (L), or 1000-2999 level, will be accepted to fulfill the 36 semester credit hours of occupational specialization. However, the student must meet the initial 12 hours qualification requirement with American Council on Education (ACE) recommended credit from military courses. These are identified in the service transcripts by a designated regulation number. Once the service member meets the minimum 12 hours, relevant lower level ACE recommended military occupational specialty (MOS) credits may be then applied to meet the final 24 hours in the occupational specialization area. In the military transcripts, credits are awarded for the 'same' skills multiple times. However, the awarding of credit is at different skill levels. Only the ACE credit at the higher skill level will be accepted for credit in the BAAS-BUSI Occupational Specialization Area. See the Coordinator, Military Services if there are questions concerning skill levels.

Technical/Vocational (non-conferred degree/non-certificate and non-military)

A student that does not have a conferred AAS or CC may apply technical or vocational credit earned at an accredited college to the OSA. The applied credit must comprise an emphasis in a particular discipline (minimum 12 semester credit hours). The student will then be responsible to complete the remaining 24 semester credit hours, either with other relevant technical or vocational credit, military education, training, or academic credit, as previously prescribed.

Training

A student may have participated in work-related training outside of the academic or military education environment. Acceptable training must be related to the student's technical or vocational emphasis. Students must provide verified evidence of training, which include the number of contact hours. Verification includes transcripts provided by the trainer or training institution or certification of training by the student's supervisor at the time of the training. Additionally, certificates of completion should be provided with a supervisor's certification.

College of Business Administration's academic advisors may recommend semester credit hours based on the number of contact hours. Contact hour conversion to semester credit hour: 15 contact hours = 1 semester credit hour (i.e. 45 contact hours = 3 semester credit hours).

Bachelor of Applied Arts and Sciences - Information Technology Data Analytics Concentration Program Requirements

Refer to the General Education Core Requirements (https://catalog.tamuct.edu/undergraduate-information/general-education-core-requirements/) page for more information on the CORE REQ coursework. The Field of Study (FOS) courses are listed in the footnotes (if applicable). At least 120 credit hours are required for the degree.The program listed is a general guideline for semester coursework, speak with a college advisor for an individualized student education plan.

Code	Title	Credit Hours
First Year		
Fall		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Spring		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Second Year		
Fall		
Occupational/Technical Specialization [1]		3
CORE REQ Communications (010)		3
CORE REQ Mathematics (020)		3
CORE REQ American History (060)		3
CORE REQ Creative Arts (050)		3
Spring		
CORE REQ Communications (010)		3
CORE REQ American History (060)		3
CORE REQ Social and Behavioral Sciences (080)		3
CORE REQ Life and Physical Science (030)		3

CORE REQ Government/Political Science (070)		3
Third Year		
Fall		
CORE REQ Life and Physical Science (030)		3
CORE REQ Component Area Option (090)		3
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (CORE REQ (090))	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
CIS 3302	Introduction to Business Analytics	3
Spring		
CIS 3306	Data Visualization	3
CIS 4341	Information Technology Security and Risk Management	3
BUSI 3311	Business Statistics	3
CIS 3347	Data Communications and Infrastructure	3
CIS 3360	Ethics in Computing	3
Fourth Year		
Fall		
CIS 4350	Management Information Systems	3
CIS 4302	Web & Social Analytics	3
CIS 3365	System Analysis and Design	3
CIS 4301	Database Theory and Practices	3
Spring		
CIS 4352	Structured Query Language	3
CIS 4303	Data Mining	3
CIS 4360	Strategic Information Systems	3
Upper-Level CIS Elective		3
CIS 4090	Computer Information Systems Capstone Assessment	0
Total Credit Hours		**120**

[1] For the Occupational/Technical Specialization credits, students must have a minimum of 12 semester credit hours consisting of technical, occupational, and military training and many include academic electives to complete the maximum allowable 36 semester credit hours.

Bachelor of Applied Arts and Sciences - Information Technology Cybersecurity Concentration Program Requirements

Refer to the General Education Core Requirements (https://catalog.tamuct.edu/undergraduate-information/general-education-core-requirements/) page for more information on the CORE REQ coursework. The Field of Study (FOS) courses are listed in the footnotes (if applicable). At least 120 credit hours are required for the degree.The program listed is a general guideline for semester coursework, speak with a college advisor for an individualized student education plan.

Code	Title	Credit Hours
First Year		
Fall		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Spring		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Second Year		
Fall		
Occupational/Technical Specialization [1]		3
CORE REQ Communications (010)		3
CORE REQ Mathematics (020)		3
CORE REQ American History (060)		3
CORE REQ Creative Arts (050)		3
Spring		
CORE REQ Communications (010)		3
CORE REQ American History (060)		3
CORE REQ Social and Behavioral Sciences (080)		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Government/Political Science (070)		3
Third Year		
Fall		
CORE REQ Life and Physical Science (030)		3
CORE REQ Component Area Option (090)		3
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (CORE REQ (090))	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
CIS 4341	Information Technology Security and Risk Management	3
Spring		
BUSI 3311	Business Statistics	3
CIS 3347	Data Communications and Infrastructure	3
CIS 3360	Ethics in Computing	3

CIS 4350	Management Information Systems	3
CIS 3361	Introduction to Computer Forensics	3
CIS 4342	Computer Security Principles and Practices	3
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3
CIS 4301	Database Theory and Practices	3
CIS 4345	Network and Systems Security	3
CIS 4346	Applied Security	3
Spring		
CIS 4360	Strategic Information Systems	3
CIS 4348	Security Trends and Malware Analysis	3
Upper-Level CIS Elective		3
CIS 4090	Computer Information Systems Capstone Assessment	0
Total Credit Hours		**120**

[1] For the Occupational/Technical Specialization credits, students must have a minimum of 12 semester credit hours consisting of technical, occupational, and military training and many include academic electives to complete the maximum allowable 36 semester credit hours.

Bachelor of Arts Applied and Science - Information Technology Management and Networking Concentration Program Requirements

Refer to the General Education Core Requirements (https://catalog.tamuct.edu/undergraduate-information/general-education-core-requirements/) page for more information on the CORE REQ coursework. The Field of Study (FOS) courses are listed in the footnotes (if applicable). At least 120 credit hours are required for the degree.

The program listed is a general guideline for semester coursework, speak with a college advisor for an individualized student education plan.

Code	Title	Credit Hours
First Year		
Fall		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Spring		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Second Year		
Fall		
Occupational/Technical Specialization [1]		3
CORE REQ Communications (010)		3
CORE REQ Mathematics (020)		3
CORE REQ American History (060)		3
CORE REQ Creative Arts (050)		3
Spring		
CORE REQ Communications (010)		3
CORE REQ American History (060)		3
CORE REQ Social and Behavioral Sciences (080)		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Government/Political Science (070)		3
Third Year		
Fall		
CORE REQ Life and Physical Science (030)		3
CORE REQ Component Area Option (090)		3
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (CORE REQ (090))	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
Spring		
BUSI 3311	Business Statistics	3
CIS 3347	Data Communications and Infrastructure	3
CIS 3360	Ethics in Computing	3
CIS 3305	Operating Systems Theory and Practice	3
CIS 4350	Management Information Systems	3
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3
CIS 4301	Database Theory and Practices	3
CIS 4341	Information Technology Security and Risk Management	3
CIS 4335	UNIX Systems Administration	3
CIS 4376	Network Administration	3
Spring		
CIS 4360	Strategic Information Systems	3
CIS 4345	Network and Systems Security	3
CIS 4378	Comprehensive Networking	3
Upper-Level CIS Elective		3

CIS 4090	Computer Information Systems Capstone Assessment	0
Total Credit Hours		**120**

[1] For the Occupational/Technical Specialization credits, students must have a minimum of 12 semester credit hours consisting of technical, occupational, and military training and many include academic electives to complete the maximum allowable 36 semester credit hours.

Bachelor of Arts Applied and Science - Information Technology Software and Database Design Concentration Program Requirements

Refer to the General Education Core Requirements (https://catalog.tamuct.edu/undergraduate-information/general-education-core-requirements/) page for more information on the CORE REQ coursework. The Field of Study (FOS) courses are listed in the footnotes (if applicable). At least 120 credit hours are required for the degree.

Code	Title	Credit Hours
First Year		
Fall		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Spring		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Second Year		
Fall		
Occupational/Technical Specialization [1]		3
CORE REQ Communications (010)		3
CORE REQ Mathematics (020)		3
CORE REQ American History (060)		3
CORE REQ Creative Arts (050)		3
Spring		
CORE REQ Communications (010)		3
CORE REQ American History (060)		3
CORE REQ Social and Behavioral Sciences (080)		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Government/Political Science (070)		3
Third Year		
Fall		
CORE REQ Life and Physical Science (030)		3
CORE REQ Component Area Option (090)		3
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (CORE REQ (090))	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
Spring		
BUSI 3311	Business Statistics	3
CIS 3347	Data Communications and Infrastructure	3
CIS 3340	Advanced C++ Programming	3
or CIS 3341	Advanced Visual Basic Programming	
or CIS 3342	Advanced Java Programming	
or CIS 3343	C# Programming for Windows and the Web	
CIS 3360	Ethics in Computing	3
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3
CIS 4301	Database Theory and Practices	3
CIS 4341	Information Technology Security and Risk Management	3
CIS 4350	Management Information Systems	3
CIS 3351	Data Structures	3
Spring		
CIS 4360	Strategic Information Systems	3
CIS 4340	Algorithm Design and Analysis	3
CIS 4352	Structured Query Language	3
CIS 4379	Software Engineering for E-Business	3
Upper-Level CIS Elective		3
CIS 4090	Computer Information Systems Capstone Assessment	0
Total Credit Hours		**120**

[1] For the Occupational/Technical Specialization credits, students must have a minimum of 12 semester credit hours consisting of technical, occupational, and military training and many include academic electives to complete the maximum allowable 36 semester credit hours.

Bachelor of Applied Arts and Sciences - Information Technology Without Concentration Program Requirements

Refer to the General Education Core Requirements (https://catalog.tamuct.edu/undergraduate-information/general-education-core-requirements/) page for more information on the CORE REQ coursework. The Field of Study (FOS) courses are listed in the footnotes (if applicable). At least 120 credit hours are required for the degree.

The program listed is a general guideline for semester coursework, speak with a college advisor for an individualized student education plan.

Code	Title	Credit Hours
First Year		
Fall		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Spring		
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Occupational/Technical Specialization [1]		3
Second Year		
Fall		
Occupational/Technical Specialization [1]		3
CORE REQ Communications (010)		3
CORE REQ Mathematics (020)		3
CORE REQ American History (060)		3
CORE REQ Creative Arts (050)		3
Spring		
CORE REQ Communications (010)		3
CORE REQ American History (060)		3
CORE REQ Social and Behavioral Sciences (080)		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Government/Political Science (070)		3
Third Year		
Fall		
CORE REQ Life and Physical Science (030)		3
CORE REQ Component Area Option (090)		3
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (CORE REQ (090))	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
Spring		
BUSI 3311	Business Statistics	3
CIS 3347	Data Communications and Infrastructure	3
CIS 3360	Ethics in Computing	3
CIS 4350	Management Information Systems	3
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3
CIS 4301	Database Theory and Practices	3
CIS 4341	Information Technology Security and Risk Management	3
Upper-Level CIS Electives		3
Upper-Level CIS Electives		3
Spring		
CIS 4360	Strategic Information Systems	3
Upper-Level CIS or COBA Electives [2]		3
Upper-Level CIS or COBA Elective [2]		3
Upper-Level CIS or COBA Electives [2]		3
Upper-Level CIS Electives		3
CIS 4090	Computer Information Systems Capstone Assessment	0
Total Credit Hours		**120**

1 For the Occupational/Technical Specialization credits, students must have a minimum of 12 semester credit hours consisting of technical, occupational, and military training and many include academic electives to complete the maximum allowable 36 semester credit hours.

2 Please see your advisor for information on recommended micro-credential course offerings.