B.B.A. COMPUTER INFORMATION SYSTEMS

OVERVIEW

The Bachelor of Business Administration (BBA) in Computer Information Systems at Texas A&M University-Central Texas provides a foundation in critical thinking and analysis of systems development, including training to prepare for diverse business information technology careers. The program is designed to enrich student's problem-solving skills, data communications capabilities, and ability to analyze, design, and build systems solutions to address the growing information needs of the organization. Studies will focus on the requisite technical and business knowledge and also stress oral and written business communication, global business awareness, and ethical behavior.

Depending on career preference, students can choose from four areas of specialization: Data Analytics, Cybersecurity, Management& Networking and Software Engineering & Database Design.

Program Level Student Learning Outcomes

The student will be able to:

- Writing Ability: Demonstrate proficiency in written communications.
- Presentation Skills: Demonstrate proficiency in oral presentations.
- Exhibit cross-cultural competencies that will aid in communicating and working with people from different cultures
- Design and defend a reasoned resolution to an ethical challenge by applying ethical frameworks
- Demonstrate knowledge proficiency in the core business disciplines and integrate across multiple business disciplines.
- Make decisions through business data analysis.
- Demonstrate knowledge proficiency in the area of concentration: Networking Management, Software Engineering Database Design, Cybersecurity, and Data Analytics.

Bachelor of Business Administration - Computer Information Systems 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.

Code	Title	Credit Hours
First Year		
Fall		
CORE REQ Communication (010)		3
CORE REQ Mathematics (020) [1]		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Creative Arts (050)		3
ACCT 2301	Principles of Financial Accounting (CORE REQ (090)) [1]	3
Spring		
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Life and Physical Science (030)		3
ECON 2301	Principles of Macroeconomics (CORE REQ (080)) [1]	3
ACCT 2302	Principles of Managerial Accounting (DEG REQ) [1]	3
COSC 1301	Introduction to Computing (DEG REQ) [1]	3
or BCIS 1305	Business Computer Applications	
or CIS 3300	Computer Technology and Impact	
Second Year		
Fall		
SPCH 1311	Introduction to Speech Communication (CORE REQ (010))	3
or SPCH 1315	Public Speaking	
or SPCH 1321	Business & Professional Communication	
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
ECON 2302	Principles of Microeconomics (CORE REQ (090)) [1]	3
Any Level Elective [1]		3
Spring		
BUSI 3301	Professionalism and Communication in Business	3
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (DEG REQ)	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
COSC 1315	Fundamentals of Programming	3
or CIS 3303	Programming Logic and Design	
Third Year		
Fall		
CIS 3302	Introduction to Business Analytics	3
CIS 4350	Management Information Systems	3
MKTG 3301	Marketing	3
MGMT 3350	Management and Organizational Behavior	3
Spring		
BUSI 3332	Legal Environment of Business	3
or BUSI 2301	Business Law	
CIS 3306	Data Visualization	3
CIS 3347	Data Communications and Infrastructure	3
CIS 4341	Information Technology Security and Risk Management	3
BUSI 3311	Business Statistics [1]	3

or BUSI 2305	Business Statistics	
FIN 3301	Financial Management I	3
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3
CIS 4302	Web & Social Analytics	3
CIS 3360	Ethics in Computing	3
CIS 4301	Database Theory and Practices	3
Upper-Level CIS Elective		3
Spring		
CIS 4303	Data Mining	3
CIS 4351	IS Project Management	3
CIS 4360	Strategic Information Systems	3
CIS 4352	Structured Query Language	3
BUSI 4359	Business Strategy	3
BUSI 4090	Business Capstone Assessment	0
Total Credit Hours		**120**

[1] Lower Level Electives, Any Level Electives, Component Area Options, or Degree Requirements (DEG REQ) may consist of the FOS courses: MATH 1324, ECON 2301, ECON 2302, BCIS 1305, ACCT 2301, ACCT 2302, BUSI 1301, BUSI 2305.

Bachelor of Business Administration - Computer Information Systems 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.

Code	Title	Credit Hours
First Year		
Fall		
CORE REQ Communication (010)		3
CORE REQ Mathematics (020) [1]		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Creative Arts (050)		3
ACCT 2301	Principles of Financial Accounting (CORE REQ (090)) [1]	3
Spring		
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Life and Physical Science (030)		3
ECON 2301	Principles of Macroeconomics (CORE REQ (080)) [1]	3
ACCT 2302	Principles of Managerial Accounting (DEG REQ) [1]	3
COSC 1301	Introduction to Computing (DEG REQ) [1]	3
or BCIS 1305	Business Computer Applications	
or CIS 3300	Computer Technology and Impact	
Second Year		
Fall		
SPCH 1311	Introduction to Speech Communication (CORE REQ (010))	3
or SPCH 1315	Public Speaking	
or SPCH 1321	Business & Professional Communication	
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
ECON 2302	Principles of Microeconomics (CORE REQ (090)) [1]	3
Any Level Elective [1]		3
Spring		
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (DEG REQ)	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
COSC 1315	Fundamentals of Programming	3
or CIS 3303	Programming Logic and Design	
BUSI 3301	Professionalism and Communication in Business	3
Third Year		
Fall		
CIS 3347	Data Communications and Infrastructure	3
BUSI 3332	Legal Environment of Business	3
or BUSI 2301	Business Law	
CIS 3302	Introduction to Business Analytics	3
MGMT 3350	Management and Organizational Behavior	3
CIS 4341	Information Technology Security and Risk Management	3
Spring		
BUSI 3311	Business Statistics [1]	3
or BUSI 2305	Business Statistics	
CIS 3361	Introduction to Computer Forensics	3
CIS 4342	Computer Security Principles and Practices	3
CIS 3360	Ethics in Computing	3
MKTG 3301	Marketing	3
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3

CIS 4345	Network and Systems Security	3
CIS 4350	Management Information Systems	3
CIS 4346	Applied Security	3
FIN 3301	Financial Management I	3
Spring		
CIS 4351	IS Project Management	3
CIS 4301	Database Theory and Practices	3
CIS 4348	Security Trends and Malware Analysis	3
CIS 4360	Strategic Information Systems	3
BUSI 4359	Business Strategy	3
BUSI 4090	Business Capstone Assessment	0
Total Credit Hours		**120**

[1] Lower Level Electives, Any Level Electives, Component Area Options, or Degree Requirements (DEG REQ) may consist of the FOS courses: MATH 1324, ECON 2301, ECON 2302, BCIS 1305, ACCT 2301, ACCT 2302, BUSI 1301, BUSI 2305.

Bachelor of Business Administration - Computer Information Systems 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.

Code	Title	Credit Hours
First Year		
Fall		
CORE REQ Communication (010)		3
CORE REQ Mathematics (020) [1]		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Creative Arts (050)		3
ACCT 2301	Principles of Financial Accounting (CORE REQ (090)) [1]	3
Spring		
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Life and Physical Science (030)		3
ECON 2301	Principles of Macroeconomics (CORE REQ (080)) [1]	3
ACCT 2302	Principles of Managerial Accounting (DEG REQ) [1]	3
COSC 1301	Introduction to Computing (DEG REQ) [1]	3
or BCIS 1305	Business Computer Applications	
or CIS 3300	Computer Technology and Impact	
Second Year		
Fall		
SPCH 1311	Introduction to Speech Communication (CORE REQ (010))	3
or SPCH 1315	Public Speaking	
or SPCH 1321	Business & Professional Communication	
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
ECON 2302	Principles of Microeconomics (CORE REQ (090)) [1]	3
Any Level Elective [1]		3
Spring		
BUSI 3301	Professionalism and Communication in Business	3
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (DEG REQ)	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
COSC 1315	Fundamentals of Programming	3
or CIS 3303	Programming Logic and Design	
Third Year		
Fall		
CIS 3347	Data Communications and Infrastructure	3
CIS 3302	Introduction to Business Analytics	3
FIN 3301	Financial Management I	3
MKTG 3301	Marketing	3
MGMT 3350	Management and Organizational Behavior	3
Spring		
CIS 3305	Operating Systems Theory and Practice	3
CIS 3360	Ethics in Computing	3
CIS 4341	Information Technology Security and Risk Management	3
BUSI 3332	Legal Environment of Business	3
or BUSI 2301	Business Law	
BUSI 3311	Business Statistics [1]	3
or BUSI 2305	Business Statistics	
Fourth Year		
Fall		
CIS 3365	System Analysis and Design	3
CIS 4345	Network and Systems Security	3

CIS 4350	Management Information Systems	3
CIS 4301	Database Theory and Practices	3
CIS 4376	Network Administration	3
Spring		
CIS 4351	IS Project Management	3
CIS 4360	Strategic Information Systems	3
CIS 4378	Comprehensive Networking	3
BUSI 4359	Business Strategy	3
CIS 4335	UNIX Systems Administration	3
BUSI 4090	Business Capstone Assessment	0
Total Credit Hours		**120**

[1] Lower Level Electives, Any Level Electives, Component Area Options, or Degree Requirements (DEG REQ) may consist of the FOS courses: MATH 1324, ECON 2301, ECON 2302, BCIS 1305, ACCT 2301, ACCT 2302, BUSI 1301, BUSI 2305.

Bachelor of Business Administration - Computer Information Systems 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		
CORE REQ Communication (010)		3
CORE REQ Mathematics (020) [1]		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Creative Arts (050)		3
ACCT 2301	Principles of Financial Accounting (CORE REQ (090)) [1]	3
Spring		
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Life and Physical Science (030)		3
ECON 2301	Principles of Macroeconomics (CORE REQ (080)) [1]	3
ACCT 2302	Principles of Managerial Accounting (DEG REQ) [1]	3
COSC 1301	Introduction to Computing (DEG REQ) [1]	3
or BCIS 1305	Business Computer Applications	
or CIS 3300	Computer Technology and Impact	
Second Year		
Fall		
SPCH 1311	Introduction to Speech Communication (Core REQ (010))	3
or SPCH 1315	Public Speaking	
or SPCH 1321	Business & Professional Communication	
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
ECON 2302	Principles of Microeconomics (CORE REQ (090)) [1]	3
Any Level Elective [1]		3
Spring		
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
COSC 1320	C Programming I (DEG REQ)	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
COSC 1315	Fundamentals of Programming	3
or CIS 3303	Programming Logic and Design	
BUSI 3301	Professionalism and Communication in Business	3
Third Year		
Fall		
CIS 3302	Introduction to Business Analytics	3
BUSI 3332	Legal Environment of Business	3
or BUSI 2301	Business Law	
FIN 3301	Financial Management I	3
MKTG 3301	Marketing	3
MGMT 3350	Management and Organizational Behavior	3
Spring		
CIS 3347	Data Communications and Infrastructure	3
CIS 3360	Ethics in Computing	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 4341	Information Technology Security and Risk Management	3
BUSI 3311	Business Statistics [1]	3
or BUSI 2305	Business Statistics	
Fourth Year		
Fall		
CIS 3351	Data Structures	3
CIS 3365	System Analysis and Design	3

CIS 4301	Database Theory and Practices	3
CIS 4350	Management Information Systems	3
CIS 4351	IS Project Management	3
Spring		
CIS 4340	Algorithm Design and Analysis	3
CIS 4352	Structured Query Language	3
CIS 4360	Strategic Information Systems	3
BUSI 4359	Business Strategy	3
CIS 4379	Software Engineering for E-Business	3
BUSI 4090	Business Capstone Assessment	0
Total Credit Hours		**120**

[1] Lower Level Electives, Any Level Electives, Component Area Options, or Degree Requirements (DEG REQ) may consist of the FOS courses: MATH 1324, ECON 2301, ECON 2302, BCIS 1305, ACCT 2301, ACCT 2302, BUSI 1301, BUSI 2305.

Bachelor of Business Administration - Computer Information Systems 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.

Code	Title	Credit Hours
First Year		
Fall		
CORE REQ Communication (010)		3
CORE REQ Mathematics (020) [1]		3
CORE REQ Life and Physical Science (030)		3
CORE REQ Creative Arts (050)		3
ACCT 2301	Principles of Financial Accounting (CORE REQ (090)) [1]	3
Spring		
CORE REQ Language, Philosophy, and Culture (040)		3
CORE REQ Life and Physical Science (030)		3
ECON 2301	Principles of Macroeconomics (CORE REQ (080)) [1]	3
ACCT 2302	Principles of Managerial Accounting (DEG REQ) [1]	3
COSC 1301	Introduction to Computing (DEG REQ) [1]	3
or BCIS 1305	Business Computer Applications	
or CIS 3300	Computer Technology and Impact	
Second Year		
Fall		
SPCH 1311	Introduction to Speech Communication (CORE REQ (010))	3
or SPCH 1315	Public Speaking	
or SPCH 1321	Business & Professional Communication	
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
ECON 2302	Principles of Microeconomics (CORE REQ (090)) [1]	3
Any Level Elective [1]		3
Spring		
CORE REQ American History (060)		3
CORE REQ Government/Political Science (070)		3
CIS 3303	Programming Logic and Design	3
or COSC 1315	Fundamentals of Programming	
Any Level Elective [1]		3
Any Level Elective [1]		3
Third Year		
Fall		
COSC 1320	C Programming I (DEG REQ)	3
or COSC 1336	Programming Fundamentals I	
or CIS 3330	C++ Programming	
or CIS 3331	Visual Basic Programming	
or CIS 3332	Java Programming	
CIS 3347	Data Communications and Infrastructure	3
CIS 4350	Management Information Systems	3
MKTG 3301	Marketing	3
MGMT 3350	Management and Organizational Behavior	3
Spring		
CIS 3302	Introduction to Business Analytics	3
FIN 3301	Financial Management I	3
BUSI 3301	Professionalism and Communication in Business	3
CIS 3360	Ethics in Computing	3
BUSI 3311	Business Statistics [1]	3
or BUSI 2305	Business Statistics	
Fourth Year		
Fall		
CIS 4341	Information Technology Security and Risk Management	3
CIS 3365	System Analysis and Design	3
CIS 4351	IS Project Management	3
CIS 4301	Database Theory and Practices	3
BUSI 3332	Legal Environment of Business	3
or BUSI 2301	Business Law	

Spring		
CIS 4360	Strategic Information Systems	3
BUSI 4359	Business Strategy	3
Upper-Level CIS or Upper-Level COBA Elective [2]		3
Upper-Level CIS or Upper-Level COBA Elective [2]		3
Any Level CIS Elective or Upper-Level COBA Elective [2]		3
BUSI 4090	Business Capstone Assessment	0
Total Credit Hours		**120**

1 Lower Level Electives, Any Level Electives, Component Area Options, or Degree Requirements (DEG REQ) may consist of the FOS courses: MATH 1324, ECON 2301, ECON 2302, BCIS 1305, ACCT 2301, ACCT 2302, BUSI 1301, BUSI 2305.

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