

MAJOR IN BUSINESS ADMINISTRATION, INFORMATION SYSTEMS CONCENTRATION



This program is designed to provide students with a comprehensive knowledge of computer information systems along with the skills necessary for effective decision making in a business environment that is diverse, global, and highly competitive. The information systems curriculum provides students with a broad understanding of business and a sound foundation in computer fundamentals and programming, systems analysis and design, networking, database design and implementation, project management, mobile and web applications, data analytics, and information and systems security. Graduates acquire the knowledge and skills to apply information technologies to solve business problems, providing a wide variety of career opportunities.

Learning Outcomes

Students will demonstrate the ability to:

- Design, write and test computer programs
- Gather requirements and analyze and design information systems
- Model, implement, query and administer databases
- Plan and manage information technology projects

- Configure and manage computer systems and networks
- Prepare and analyze data and deliver data-driven solutions
- Develop business applications for different platforms and devices
- Assess and secure information technology assets against cyber security threats

Accelerated Program

The Information Systems concentration includes an accelerated program option (<https://provost.colostate.edu/accelerated-programs/>) for students to graduate on a faster schedule. Accelerated Programs typically include 15-16 credits each fall and spring semester for three years, plus 6-9 credits over two to three summer sessions (<https://summer.colostate.edu/acceleratedprograms/>). Students who enter CSU with prior credit (AP, IB, transfer, etc.) may use applicable courses to further accelerate their graduation. Visit the Office of the Provost website for additional information about Accelerated Programs (<https://provost.colostate.edu/accelerated-programs/>).

Potential Occupations

Computing-related careers are characterized by a rapid rate of change driven by technological developments. Participating in paid or voluntary work, internships, and cooperative education opportunities is highly recommended, to keep students abreast of new developments and to help them benefit from networking to enhance employment opportunities.

Examples of career opportunities include, but are not limited to: applications developer, business/systems analyst, business intelligence analyst, cybersecurity manager, data analyst, database developer/administrator, IT consultant, IT project manager, information security analyst, software engineer/developer, network administrator, user interface designer, and web developer/administrator.

Requirements

The College of Business requires a minimum grade point average of 2.000 in business and economics courses as a graduation requirement.

Effective Fall 2022

Freshman

		AUCC	Credits
BUS 100 or 105	Introduction to Business Exploration of Business		1
BUS 201	Foundations of Sustainable Enterprise		1
CIS 200	Business Information Systems		3
CO 150	College Composition (GT-CO2)	1A	3
ECON 202	Principles of Microeconomics (GT-SS1)	3C	3
Complete 3 credits from the following:			
MATH 117	College Algebra in Context I (GT-MA1)	1B	
MATH 118	College Algebra in Context II (GT-MA1)	1B	
MATH 124	Logarithmic and Exponential Functions (GT-MA1)	1B	
MATH 125	Numerical Trigonometry (GT-MA1)	1B	
MATH 126	Analytic Trigonometry (GT-MA1)	1B	
MATH 141 (or higher level calculus course)	Calculus in Management Sciences (GT-MA1)	1B	

Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)	3A	4
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)	1C	3
Electives		9

Total Credits		30
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Sophomore

ACT 210	Introduction to Financial Accounting		3
ACT 220	Introduction to Managerial Accounting		3
BUS 220	Ethics in Contemporary Organizations (GT-AH3)	3B	3
CIS 240	Application Design and Development		3
CIS 370	Business Analytics		3
ECON 204	Principles of Macroeconomics (GT-SS1)	3C	3
STAT 204	Statistics With Business Applications (GT-MA1)	1B	3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)		3A	3
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		3D	3
Electives			3

Total Credits		30
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Junior

All freshman and sophomore required courses must be completed prior to or concurrent with first enrollment in required junior and senior courses.

BUS 260	Social-Ethical-Regulatory Issues in Business		3
BUS 300	Business Writing and Communication (GT-CO3)	2	3
CIS 320	Project Management for Information Systems		3
CIS 355	Business Database Systems		3
CIS 360	Systems Analysis and Design		3
FIN 300 ¹	Principles of Finance	4A,4B	3
Select two courses from the following:			6
CIS 310	Data Preparation for Business Analytics		
CIS 340	Advanced Application Design and Development		
CIS 350	Operating Systems and Networks		
CIS 410	Web Application Development		
CIS 411	Enterprise Resource Planning Systems		
CIS 413	Advanced Networking and Security		
CIS 455	Advanced Database Management		
CIS 563	Information Assurance and Security		
CIS 575	Applied Data Mining and Analytics in Business		
CIS 576	Business Data Visualization		
Electives			6

Total Credits		30
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Senior

BUS 479	Strategic Management	4A,4C	3
Select two courses from the following not taken in the junior year:			6
CIS 310	Data Preparation for Business Analytics		
CIS 340	Advanced Application Design and Development		
CIS 350	Operating Systems and Networks		
CIS 410	Web Application Development		
CIS 411	Enterprise Resource Planning Systems		

CIS 413	Advanced Networking and Security		
CIS 455	Advanced Database Management		
CIS 563	Information Assurance and Security		
CIS 575	Applied Data Mining and Analytics in Business		
CIS 576	Business Data Visualization		
MGT 301	Supply Chain Management		3
MGT 320	Contemporary Management Principles/Practices		3
MKT 300	Marketing	4B	3
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)		3B	3
Electives ²			9
Total Credits			30
Program Total Credits:			120

¹ Students who have taken FIN 305 and/or MKT 305 prior to admission to the College of Business may substitute those courses to satisfy the category 4A and 4B requirements. All other students are required to take FIN 300 and MKT 300 to satisfy categories 4A and 4B.

² Select enough elective credits to bring the program total to a minimum of 120 credits, of which at least 42 must be upper-division (300- to 400-level). A minimum of 6 elective credits must be upper-division.

Students are not to utilize the satisfactory/unsatisfactory (S/U) grading option for any Business concentration course or any Business core course (Business and non-Business subject codes) except when a course only allows S/U grading.

Major Completion Map

Distinctive Requirements for Degree Program:

To Declare this Major: Direct entry as a new freshman or transfer to the College of Business is highly selective and only those students meeting academic requirements will be accepted. For details contact the Office of Admissions.

CSU and the College of Business use holistic review when determining eligibility for admission to the College of Business as a new freshman. An example of a strong candidate for admission to the College of Business is one who is actively involved in their high school and community, has at least a 3.200 GPA with a 1200 or higher on the SAT or a 27 or higher

on the ACT. For current admission criteria, contact the CSU Office of Admissions. New freshmen admitted to CSU but not directly to the College of Business will be admitted as "Undeclared Business Interest" and must meet the requirements below. To be eligible for admission to the College, CSU students (including Undeclared Business Interest) must have a 3.000 cumulative GPA on a minimum of 15 graded credits at Colorado State and a grade of B- or higher in ECON 202 and a grade of C- or higher in each course (total of 3 credits) from the following: MATH 117, MATH 118, MATH 124, MATH 125, MATH 126, MATH 141, or a higher level calculus course.

External transfer students who have completed a minimum of 15 graded credits with a 3.000 cumulative GPA and a grade of B- or higher in ECON 202 and a grade of C- or higher in each course (total of 3 credits) from the following: MATH 117, MATH 118, MATH 124, MATH 125, MATH 126, MATH 141, or a higher level calculus course.. External transfer students who do not meet the above criteria will be admitted to Undeclared and must complete the requirements stated above.

To Prepare for First Semester: The Curriculum for the Business Administration-Information Systems concentration assumes students will be able to successfully complete the College of Business Math requirement within the first year.

The College of Business requires a minimum grade point average of 2.000 in business and economics courses as a graduation requirement.

Freshman

Semester 1		Critical	Recommended	AUCC	Credits
BUS 100 or 105	Introduction to Business Exploration of Business		X		1
BUS 201	Foundations of Sustainable Enterprise				1
CO 150	College Composition (GT-CO2)		X	1A	3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)				3A	4
Elective					6
Total Credits					15
Semester 2		Critical	Recommended	AUCC	Credits
CIS 200	Business Information Systems	X			3
ECON 202	Principles of Microeconomics (GT-SS1)	X		3C	3
Complete 3 credits from the following:					3
MATH 117	College Algebra in Context I (GT-MA1)			1B	

MATH 118	College Algebra in Context II (GT-MA1)			1B	
MATH 124	Logarithmic and Exponential Functions (GT-MA1)			1B	
MATH 125	Numerical Trigonometry (GT-MA1)			1B	
MATH 126	Analytic Trigonometry (GT-MA1)			1B	
MATH 141	Calculus in Management Sciences (GT-MA1)	X		1B	
(or higher level calculus course)					
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)		X		1C	3
Elective					3
CO 150 must be completed by the end of Semester 2.		X			
Total Credits					15
Sophomore					
Semester 3		Critical	Recommended	AUCC	Credits
ACT 210	Introduction to Financial Accounting	X			3
CIS 240	Application Design and Development		X		3
ECON 204	Principles of Macroeconomics (GT-SS1)			3C	3
STAT 204	Statistics With Business Applications (GT-MA1)			1B	3
Electives					3
Total Credits					15
Semester 4		Critical	Recommended	AUCC	Credits
ACT 220	Introduction to Managerial Accounting	X			3
BUS 220	Ethics in Contemporary Organizations (GT-AH3)			3B	3
CIS 370	Business Analytics				3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)				3A	3
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)				3D	3
Total Credits					15
Junior					
Semester 5		Critical	Recommended	AUCC	Credits
BUS 260	Social-Ethical-Regulatory Issues in Business				3
CIS 320	Project Management for Information Systems				3
CIS 355	Business Database Systems				3
BUS 300	Business Writing and Communication (GT-CO3)		X	2	3
Elective					3
Total Credits					15
Semester 6		Critical	Recommended	AUCC	Credits
CIS 360	Systems Analysis and Design				3
FIN 300	Principles of Finance		X	4A,4B	3
Upper-Division CIS electives (See List on Concentration Requirements Tab)					6
Elective					3
CIS 240 must be completed by the end of Semester 6.		X			
Total Credits					15
Senior					
Semester 7		Critical	Recommended	AUCC	Credits
MKT 300	Marketing	X		4B	3
MGT 301	Supply Chain Management	X			3
MGT 320	Contemporary Management Principles/Practices	X			3
Upper-Division CIS elective (See List on Concentration Requirements Tab)					3
Elective					3
Total Credits					15

Semester 8	Critical	Recommended	AUCC	Credits
BUS 479 Strategic Management	X		4A,4C	3
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)	X		3B	3
Upper-Division CIS elective (See List on Concentration Requirements Tab)	X			3
Electives	X			6
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.				
Total Credits				15
Program Total Credits:				120

Second Concentration with International Business

A second concentration in International Business may be taken in conjunction with the Information Systems concentration. Upon

graduation, both concentrations will be noted on a student's official transcript.

Effective Fall 2022

The College of Business requires a minimum grade point average of 2.000 in business and economics courses as a graduation requirement.

Freshman

	AUCC	Credits
BUS 100 or 105 Introduction to Business Exploration of Business		1
BUS 201 Foundations of Sustainable Enterprise		1
CIS 200 Business Information Systems		3
CO 150 College Composition (GT-CO2)	1A	3
ECON 202 Principles of Microeconomics (GT-SS1)	3C	3
Complete 3 credits from the following:		3
MATH 117 College Algebra in Context I (GT-MA1)	1B	
MATH 118 College Algebra in Context II (GT-MA1)	1B	
MATH 124 Logarithmic and Exponential Functions (GT-MA1)	1B	
MATH 125 Numerical Trigonometry (GT-MA1)	1B	
MATH 126 Analytic Trigonometry (GT-MA1)	1B	
MATH 141 (or higher level calculus course) Calculus in Management Sciences (GT-MA1)	1B	
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)	3A	4
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)	1C	3
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)	3D	3
Electives		3
Total Credits		27

Sophomore

ACT 210 Introduction to Financial Accounting		3
ACT 220 Introduction to Managerial Accounting		3
BUS 220 Ethics in Contemporary Organizations (GT-AH3)	3B	3
BUS 260 Social-Ethical-Regulatory Issues in Business		3
CIS 240 Application Design and Development		3
ECON 204 Principles of Macroeconomics (GT-SS1)	3C	3
STAT 204 Statistics With Business Applications (GT-MA1)	1B	3
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)	3B	3

Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)		3A	3
International Business Group 2 - Global Focus			3
Total Credits			30
Junior			
BUS 300	Business Writing and Communication (GT-CO3)	2	3
CIS 320	Project Management for Information Systems		3
CIS 355	Business Database Systems		3
CIS 360	Systems Analysis and Design		3
CIS 370	Business Analytics		3
FIN 300	Principles of Finance	4A,4B	3
FIN 475	International Business Finance		3
MGT 301	Supply Chain Management		3
MGT 435	Global Ethical Leadership Stakeholder Mgmt		3
International Business Group 3 - Experiential Learning Requirement			3
Total Credits			30
Senior			
BUS 479	Strategic Management	4A,4C	3
MGT 320	Contemporary Management Principles/Practices		3
MGT 475	International Business Management		3
MKT 300	Marketing	4B	3
CIS Group - Select four courses from the following:			12
CIS 310	Data Preparation for Business Analytics		
CIS 340	Advanced Application Design and Development		
CIS 350	Operating Systems and Networks		
CIS 410	Web Application Development		
CIS 411	Enterprise Resource Planning Systems		
CIS 413	Advanced Networking and Security		
CIS 455	Advanced Database Management		
CIS 563	Information Assurance and Security		
CIS 575	Applied Data Mining and Analytics in Business		
CIS 576	Business Data Visualization		
International Business Group 1 - Select one course from the following:			3
MKT 365	International Marketing		
MGT 468	Negotiating Globally		
MGT 478	Global Supply Chain Management		
International Business Group 2 - Global Focus			3
International Business Group 3 - Experiential Learning Requirement			3
Total Credits			33
Program Total Credits:			120

Interdisciplinary: International Business Group 2 – Global Focus (6 credits)

Code	Title	Credits			
Select 6 credits from the following:		6			
AM 430	International Retailing	3	ECON 440	Economics of International Trade and Policy	3
ANTH 200	Cultures and the Global System (GT-SS3)	3	ECON 442	Economics of International Finance and Policy	3
ECON 317	Population Economics	3	ECON 460	Economic Development	3
ECON 332/POLS 332	International Political Economy	3	GR 320	Cultural Geography	3
			HIST 470	World Environmental History, 1500-Present	3
			IE 450/SOWK 450	International Social Welfare and Development	3
			IE 470	Women and Development	3

IE 471	Children and Youth in Global Context	3
IE 472	Education for Global Peace	3
IE 478	Managing International Development Programs	3
JTC 412	International Mass Communication	3
NRRT 320	International Issues-Recreation and Tourism	3
POLS 232	International Relations (GT-SS1)	3
POLS 362	Global Environmental Politics	3
POLS 431	International Law	3
POLS 433	International Organization	3
POLS 437	International Security	3
POLS 442	Environmental Politics in Developing World	3
POLS 462	Globalization, Sustainability, and Justice	3
SOC 364	Food, Agriculture and Global Society	3
SPCM 434	Intercultural Communication	3

Immersion: International Business Group 3 – Experiential Learning Requirement (6 credits)

Code	Title	Credits
Select at least one from the following:		6
	Education Abroad experience	
	Internship with global focus	
	L*** language course	

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Second Concentration Major Completion Map

Distinctive Requirements for Degree Program:

Freshman

Semester 1		Critical	Recommended	AUCC	Credits
BUS 100 or 105	Introduction to Business Exploration of Business		X		1
BUS 201	Foundations of Sustainable Enterprise		X		1
CO 150	College Composition (GT-CO2)		X	1A	3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)			X	3A	4
Diversity, Equity, and Inclusion (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#diversity-equity-inclusion)		X		1C	3
Electives			X		3

Total Credits

15

Semester 2		Critical	Recommended	AUCC	Credits
CIS 200	Business Information Systems		X		3
ECON 202	Principles of Microeconomics (GT-SS1)	X		3C	3
Complete 3 credits from the following:					3
MATH 117	College Algebra in Context I (GT-MA1)			1B	
MATH 118	College Algebra in Context II (GT-MA1)			1B	
MATH 124	Logarithmic and Exponential Functions (GT-MA1)			1B	

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External transfer students who have completed a minimum of 15 graded credits with a 3.000 cumulative GPA and a grade of B- or higher in ECON 202 and a grade of C- or higher in each course (total of 3 credits) from the following: MATH 117, MATH 118, MATH 124, MATH 125, MATH 126, MATH 141, or a higher level calculus course. External transfer students who do not meet the above criteria will be admitted to Undeclared and must complete the requirements stated above.

To Prepare for First Semester: The Curriculum for the Business Administration- Information Systems concentration assumes students will be able to successfully complete the College of Business Math requirement within the first year.

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MATH 125	Numerical Trigonometry (GT-MA1)		1B	
MATH 126	Analytic Trigonometry (GT-MA1)		1B	
MATH 141	Calculus in Management Sciences (GT-MA1)	X	1B	
(or higher level calculus course)				
Historical Perspectives (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#historical-perspectives)		X	3D	3
BUS 100 or BUS 105 and CO 150 must be completed by the end of Semester 2.		X		

Total Credits	12
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Sophomore

Semester 3		Critical	Recommended	AUCC	Credits
ACT 210	Introduction to Financial Accounting		X		3
BUS 220	Ethics in Contemporary Organizations (GT-AH3)		X	3B	3
ECON 204	Principles of Macroeconomics (GT-SS1)		X	3C	3
STAT 204	Statistics With Business Applications (GT-MA1)		X	1B	3
Biological and Physical Sciences (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#biological-physical-sciences)			X	3A	3

Total Credits	15
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Semester 4		Critical	Recommended	AUCC	Credits
ACT 220	Introduction to Managerial Accounting		X		3
BUS 260	Social-Ethical-Regulatory Issues in Business		X		3
CIS 240	Application Design and Development				3
Arts and Humanities (http://catalog.colostate.edu/general-catalog/all-university-core-curriculum/aucc/#arts-humanities)			X	3B	3
International Business Group 2 - Global Focus			X		3

Total Credits	15
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Junior

Semester 5		Critical	Recommended	AUCC	Credits
CIS 320	Project Management for Information Systems		X		3
CIS 370	Business Analytics				3
FIN 300	Principles of Finance		X	4A,4B	3
MGT 301	Supply Chain Management		X		3
MGT 435	Global Ethical Leadership Stakeholder Mgmt		X		3

Total Credits	15
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Semester 6		Critical	Recommended	AUCC	Credits
BUS 300	Business Writing and Communication (GT-CO3)		X	2	3
CIS 355	Business Database Systems		X		3
CIS 360	Systems Analysis and Design				3
FIN 475	International Business Finance				3
International Business Group 3 - Experiential Learning Requirement			X		3

Total Credits	15
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Senior

Semester 7		Critical	Recommended	AUCC	Credits
MGT 320	Contemporary Management Principles/Practices	X			3
MGT 475	International Business Management	X			3
MKT 300	Marketing	X		4B	3
CIS Group - Select two courses from the following:					6
CIS 310	Data Preparation for Business Analytics				
CIS 340	Advanced Application Design and Development				
CIS 350	Operating Systems and Networks				
CIS 410	Web Application Development				

CIS 411	Enterprise Resource Planning Systems				
CIS 413	Advanced Networking and Security				
CIS 455	Advanced Database Management				
CIS 563	Information Assurance and Security				
CIS 575	Applied Data Mining and Analytics in Business				
CIS 576	Business Data Visualization				
International Business Group 2 - Global Focus		X			3
Total Credits					18
Semester 8		Critical	Recommended	AUCC	Credits
BUS 479	Strategic Management	X		4A,4C	3
CIS Group - Select two courses from the following not taken in semester 7:		X			6
CIS 310	Data Preparation for Business Analytics				
CIS 340	Advanced Application Design and Development	X			
CIS 350	Operating Systems and Networks				
CIS 410	Web Application Development	X			
CIS 411	Enterprise Resource Planning Systems	X			
CIS 413	Advanced Networking and Security	X			
CIS 455	Advanced Database Management	X			
CIS 563	Information Assurance and Security				
CIS 575	Applied Data Mining and Analytics in Business				
CIS 576	Business Data Visualization				
International Business Group 1 - Select one course from the following:		X			3
MKT 365	International Marketing	X			
MGT 468	Negotiating Globally	X			
MGT 478	Global Supply Chain Management	X			
International Business Group 3 - Experiential Learning Requirement		X			3
The benchmark courses for the 8th semester are the remaining courses in the entire program of study.		X			
Total Credits					15
Program Total Credits:					120