1st Semester - First Year		2nd Semester - First Year	
ENG 1010 MTH 1310 COMM 1010 or COMM 1100 BUS 1850 CIS 1010*	Freshman Comp: Composing Arguments Finite Math for Mgmt & Soc Science Presentational Speaking or Fund. of Oral Comm Intro to Business Intro to Computers (*or gen elect if 75+ on CIS Placement Test)	ENG 1020 MTH 1320 BUS 1950 ____ ____ ____ ____	Freshman Comp: Analysis, Research & Doc. Calculus for Mgmt & Soc Science Business Communication Arts and Humanities Natural & Physical Science
1st Semester - Second Year		**2nd Semester - Second Year**	
____ ____ ECO 2010 ACC 2010 CIS 2010 MGT 2210	Natural & Physical Science Principles of Economics - Macro Principles of Accounting I Foundations of Information Systems Legal Environment of Business I	ECO 2020 ACC 2020 CIS 2110 ____ ____ HIS____	Principles of Economics - Micro Principles of Accounting II Structured Problem Solving in Information Systems Arts and Humanities Historical Studies Elective
1st Semester - Third Year		**2nd Semester - Third Year**	
CIS 3300 CIS 3050 CIS 3230 MGT 3000 BUS 3040	Business Analytics I Fundamentals of Systems Analysis and Design Telecommunication Systems and Networking Organizational Management Global Corporate Social Responsibility & Sustainability	CIS 3320 FIN 3300 MKT 3000 CIS 3060 CIS 3500	Business Analytics II Managerial Finance Principles of Marketing Database Management Systems Information Systems Security
1st Semester - Fourth Year		**2nd Semester - Fourth Year**	
CIS 3145 CIS ____ CIS ____ ____ ____ ____ ____	Business Application Development CIS Upper Division Elective CIS Upper Division Elective Elective Elective	MGT 4950 CIS 4050 CIS ____ ____ ____ ____ ____	Strategic Management Systems Analysis and Design CIS Capstone Course (CIS 4xxx level elective) Elective Elective

Note: General elective credits may vary. Total general electives must be sufficient for the student to meet the required University minimum of 120 credit hours. These hours may be used to meet requirements for a minor or a concentration. As per University policy, no more than 16 semester hours in human performance and sport activities (HPL), 4 semester hours of varsity sports (ATH), and no more than 7 semester hours in music ensemble courses will be counted toward the degree.

MULTICULTURAL/GLOBAL DIVERSITY REQUIREMENTS: The University's multicultural and global diversity requirements must be satisfied by taking an underlined approved course listed in the *University Catalog.*

MINORS FOR BUSINESS MAJORS: Majors in the College of Business are NOT required to complete a minor at MSU Denver. Please see an advisor if you have questions about requirements involved with taking a minor.

SUGGESTED CIS CAREER ROADMAP

First Year (0-29 Credits - EXPLORE)
- Meet with a Career Counselor at Classroom to Career Hub (AD 270)
- Take a Career Test & Attend a Career GPS workshop

Second Year (30-59 Credits – EXPLORE)
- Complete your Roadrunner Road map Form (available at MSUDenver.edu/career)
- Research occupations, attend Employer Panels, learn to write a resume/post on JobLink
- Meet with the College of Business Career Advisor

Third Year (60-89 Credits – EXPERIENCE)
- Review your Skills Checklist, practice interviewing, join our AITP student chapter, and listen to OTF Podcast
- Participate in research, study abroad, service learning, or an internship through the C2Hub

Fourth Year (90-120 Credits – EXECUTE)
- Update your profiles on JobLink and LindkedIn; attend career fairs
- Develop a job search strategy, connect with employers & apply for positions

Computer Information Systems, B.S.

> *Please note: Prerequisites for courses on this sheet may change. Prior to registering for a course you must have completed the prerequisites **currently** enforced for that course. Please check the online catalog prior to registering each semester. The following concentrations are available to CIS Students: Application Development, Business Analytics, Database Development and Administration, Information Systems Security, Network Systems and Administration or Web Development and Administration.*

This sheet applies to the 2023-2024 Catalog *only*. Students with a declared major in Computer Information Systems should work with an advisor in the College of Business or the department on course selection and sequencing to ensure timely graduation.

General Studies	33
Business core	45
Additional College of Business requirements	6-7
Major courses	27
General Electives	12-15
Total to graduate (min. 40 hrs upper division) 120 min	

Students who have reached junior standing (60 hrs) should request a Degree Progress Report and review it with a faculty advisor in the Department of Computer Information Systems and Business Analytics.

Computer Information Systems

GENERAL STUDIES

Written Communication (WC)
____   -3 (typically ENG 1010)
____   -3 (typically ENG 1020)

Oral Communication (OC)
____ COMM 1010-3   Presentational Speaking or
____ COMM 1100-3   Fund. of Oral Comm

Quantitative Literacy (QL)
____   MTH 1310-4   Finite Math for Mgt. & Social Sciences
Note: MTH1110 or MTH1400 is acceptable for transfer students or students changing their major. Consult with a math faculty advisor for approval.

Arts & Humanities
____   -3
____   -3

Historical
____   -3

Natural and Physical Sciences
____   -3
____   -3

Social and Behavioral Sciences I
____   ECO 2010-3   Principles of Economics: Macro *(QL, WC)*

Social and Behavioral Sciences II
____   ECO 2020-3   Principles of Economics: Micro *(QL, WC)*

Global Diversity **(must be satisfied within General Studies)**
____

Multicultural **(may be satisfied within General Studies, major, minor or elective)**
____

Additional College of Business Requirements (6 credits)
____ COMM 1010, Presentational Speaking, or COMM 1100, Fundamentals of Oral Communication*

____ MTH 1320, Calculus for MGT & Social Sciences or MTH 1410, Calculus I or Higher [MTH 1320 requires completion of Finite Math, College Algebra, or Pre-Calculus as a prerequisite]

*This class also counts towards a General Studies requirement

GENERAL ELECTIVES (12-15 hours)

BUSINESS CORE
45 credits. In order to graduate, students must maintain a 2.0 average inside the Business Core.

____ BUS 1850   Intro to Business
____ BUS 1950   Business Comm. (*COMM 1010 or COMM 1100, ENG 1010, Coreq ENG 1020*) *(The following business core courses require completion of Written Communication, Quantitative Literacy & Oral Communication requirement unless otherwise noted)*
____ *BUS 3040   Global Corporate Social Responsibility & Sustainability*
____ ACC 2010   Principles of Accounting I
____ ACC 2020   Principles of Accounting II (*ACC 2010, MTH 1310 or MTH 1110*)
____ CIS 2010   Foundations of Information Systems (*CIS 1010 or CIS test, Coreq. QL*)
____ CIS 3300   Business Analytics I (*MTH 1320, CIS 2010, 60 hrs*)
____ CIS 3320   Business Analytics II (*CIS 3300*)
____ ECO 2010   Principles of Macroeconomics
____ ECO 2020   Principles of Microeconomics
____ FIN 3300   Managerial Finance *ACC 2010, ECO 2010 & 2020, MTH 1320, 60 hrs*)
____ MGT 2210   Legal Environment of Business I *(Coreg QL)*
____ MGT 3000   Organizational Management *(60 Credit hrs)*
____ MKT 3000   Principles of Marketing *(60 Credit hrs)*

Senior Experience
____ MGT 4950 Strategic Management (Senior / Completion of Business Core)

MAJOR COURSES
____ CIS 2110-3   Structured Problem Solving in Information Systems (*CIS 2010*)
____ CIS 3050-3   Fundamentals of System Analysis & Design (*CIS 2110*)
____ CIS 3060-3   Database Management Systems (*CIS 2110*)
____ CIS 3145-3   Business Application Development (*CIS 2110*)
____ CIS 3230-3   Telecommunications Systems and Networking (*CIS 2110*)
____ CIS 3500-3   Information Systems Security (*CIS 3230*)
____ CIS 4050-3   Systems Analysis and Design (*CIS 3050, CIS 3060, CIS 3145, CIS 3230, CIS 3500, 90 hrs*

Select 9 hrs of upper-division electives from below in consultation with a faculty advisor: (at least 3 hours must be a 4000-level course *excludes CIS 4050*)

____ CIS 3030-3 Business Web Page Dev	____ CIS 4030-3 Web Site Administration
____ CIS 3220-3 Analysis of Hardware	____ CIS 4060-3 Adv. Database Mgmt.
____ CIS 3270-3 Adv. Comp Apps for Bus	____ CIS 4160-3 Adv. Programming Seminar
____ CIS 3280-3 Lan/Wan Sys for Bus	____ CIS 4260-3 Database Administration
____ CIS 3290-3 Operating Systems End	____ CIS 4280-3 Network Install & Admin.
____ CIS 3310-3 Business Forecasting Methods	____ CIS 4281-3 Network Install & Admin UNIX
____ CIS 3350-3 Knowldg Discovry & Data Mining	____ CIS 4370-3 Data Science & Big Data Anlytcs
____ CIS 3460-3 Data Warehouse/ Mining	____ CIS 4410-3 Management Info. Systems
____ CIS 3490-3 Managing Bus. Info, EnterpSys	____ CIS 4500-3 Info Sys Security Tools & Tech
____ CIS 3980-3 Internship	____ CIS 4550-3 Info Sys Scrty Mgt & Info Asurnc

Elective/Complementary Courses
12-15 credits of general electives (depending on the student's need to take CIS 1010 or not, based on an appropriate score on the Computer Literacy exam)