

1 st Semester - First Year		2 nd 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
1 st Semester - Second Year		2 nd 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
1 st Semester - Third Year		2 nd 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
1 st Semester - Fourth Year		2 nd 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 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 LinkedIn; attend career fairs
- Develop a job search strategy, connect with employers & apply for positions

Computer Information Systems, B.S.

Catalog 22-23

303-615-0660 Admin 590

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 2022-2023 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	34	Students who have reached junior
Business core	36	standing (60 hrs) should request a
Additional College of Business requirements	6	Degree Progress Report and review it
Major courses	30	with a faculty advisor in the
General Electives	12-15	Department of Computer Information
Total to graduate (min. 40 hrs upper division)	120 min	Systems and Business Analytics.

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)

- ___ BUS 3040-3 Global Corporate Social Responsibility & Sustainability (60 Credit hrs)
- ___ MTH 1320-3 Calculus for Management and Social Sciences

GENERAL ELECTIVES (12-15 hours)

BUSINESS CORE (required pre-reqs for each course listed)

- ___ BUS 1850-3 Intro to Business-*transfer students coming in with 6+ credits of business courses do not need to take BUS 1850 but will need another CBUS course outside of major and bus core.*
- ___ BUS 1950-3 Business Communication (CAS 1010 or 1710, ENG 1010, ENG 1020 Co-req or pre-req)

The following business core courses require completion of ENG 1020, Oral Com (OC), and Quantitative Lit (QL), unless otherwise noted

- ___ ACC 2010-3 Principles of Accounting I (no OC)
- ___ ACC 2020-3 Principles of Accounting II (ACC 2010)
- ___ CIS 2010-3 Foundations of Information Systems (CIS 1010 or CIS test, QL Co-req)
- ___ CIS 3300-3 Business Analytics I (MTH 1320 or 1410, CIS 2010 or CIS 2300, 60 hrs)
- ___ CIS 3320-3 Business Analytics II (CIS 3300, 60 hrs)
- ___ FIN 3300-3 Managerial Finance (ACC 2010, ECO 2010 & 2020, MTH 1320 or 1410, 60 hrs)
- ___ MGT 2210-3 Legal Environment of Business I (QL Co-req)
- ___ MGT 3000-3 Organizational Management (60 Credit hrs)
- ___ MKT 3000-3 Principles of Marketing (60 Credit hrs)
- ___ MGT 4950-3 Strategic Management (Senior/ Completion of Business Core)

Note: All business core courses must be completed with a grade of "C-" or better.

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)

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| ___ 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 Discovery & Data Mining | ___ CIS 4370-3 Data Science & Big Data Analytcs |
| ___ 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)