

# COMPUTER INFORMATION SYSTEMS MAJOR (B.S.)

As a Business major, the CIS program equips the graduate with the knowledge and understanding of information technology capabilities and implications, including advanced methodologies and tools for systems development. The CIS courses include content emphasizing leading-edge technologies spanning information systems solutions utilizing digital platforms, database systems, programming languages, networking, and mobile computing apps. These courses aim to develop professional skills, immediate value in the workplace, self-confidence, and a proactive attitude in graduates. The CIS graduate is equipped to excel in a variety of roles in the IT professional: business analyst, systems analyst, application developer, systems integrator, IT liaison, end-user support, network manager, vendor representative, and technical support specialist.

For further information about degree requirement policies and guidelines, see the Degree Requirements ([catalog.bentley.edu/undergraduate/degree-requirements/](http://catalog.bentley.edu/undergraduate/degree-requirements/)) page.

## Major Requirements

### Major Courses (24 Credits)

Course	Title	Credits
CS 100 is not eligible to count towards the CIS major or minor.		
Required Courses:		
CS 150	Introduction to Data and Information Management	3
or CS 160	Data-Driven Decision Making	
Select either CS 150 or CS 160, but not both.		
CS 180	Programming Fundamentals	3
CS 240	Business Processing and Communications Infrastructure	3
CS 350	Database Management Systems	3
CS 360	Business Systems Analysis and Modeling	3
Select one advanced CS elective:		3
CS 280	Object-Oriented Application Development	
CS 342	Cybersecurity	
CS 370	Introduction to Machine Learning	
CS 380	Multi-Tiered Application Development	
CS 460	Applied Software Project Management	
CS 480	Advanced Application Development Technology	
FT 370	Investment Applications of Natural Language Processing	
Select any two additional CS courses other than CS 305.		6
Some experimental CS courses (denoted by CS 298 or CS 299) cannot be counted towards the major; please verify with the CIS major coordinator.		
<b>Total Credits</b>		<b>24</b>

Qualified students in the program are highly encouraged to include an internship in their course sequence to provide on-the-job experience prior to graduation.

### The Business Environment (6 Credits)

Course	Title	Credits
CS 305	Business Processes and Systems	3
MG 300	Strategic Management	3
<b>Total Credits</b>		<b>6</b>

## General Degree Requirements

### Foundations for Success (15 Credits)

Course	Title	Credits
FDS 100	Falcon Discovery Seminar	3
<b>Communications and Writing</b>		

Select one from:

EMS 101	Critical Reading and Writing	3
or EMS 101L	Critical Reading and Writing with Lab	
or EMS 102	Critical Reading and Writing for Multilingual Students	
or EMS 102L	Critical Reading and Writing for Multilingual Students with Lab	

And one from:

EMS 104	Multimodal Communication	3
or EMS 105	Multimodal Communication for Multilingual Students	

### Information Technology

CS 100	Solving Business Problems with Information Technology	3
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### Mathematical Sciences

Select one from:

MA 105	Mathematical Foundations for Business	3
or MA 105L	Mathematical Foundations for Business with Lab	
or MA 107	Applied Calculus for Business	
or MA 107L	Applied Calculus for Business with Lab	
or MA 131	Calculus I	
or MA 131L	Calculus I with Lab	

**Total Credits** **15**

### Context and Perspectives (18 Credits)

Course	Title	Credits
Students must take six courses, one in each category of Context and Perspectives:		

Culture, Change, and Behavior ([catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#culturechangeandbehavior](http://catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#culturechangeandbehavior))

Globalization ([catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#globalization](http://catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#globalization))

Institutions and Power ([catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#institutionsandpower](http://catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#institutionsandpower))

Race, Gender, and Inequality ([catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#racegenderandinequality](http://catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#racegenderandinequality))

Scientific Inquiry ([catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#scientificinquiry](http://catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#scientificinquiry))

Values, Ethics, and Society ([catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#valuesethicsandsociety](http://catalog.bentley.edu/undergraduate/degree-requirements/context-and-perspectives/#valuesethicsandsociety))

<b>Total Credits</b>	<b>18</b>
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## Business Dynamics/Business Administration Minor (18 Credits)

Course	Title	Credits
All courses are required:		
AC 115	Introduction to Financial Reporting and Analysis	3
EC 111	Principles of Microeconomics	3
FI 118	Introduction to Finance	3
LA 100	Business Law	3
MG 116	Human Dynamics in Organizations	3
ST 113	Business Statistics	3
<b>Total Credits</b>		<b>18</b>

## Communication Intensive

All students are required to take a three-credit course designated as a Communication Intensive. This requirement can be met within a variety of course subjects in both Arts & Sciences and Business. Communication Intensive courses are designated with a "Communication Intensive" course tag in Workday. *Transfer students with a minimum of 30 credits will be waived from the Communication Intensive requirement.*

Please note that certain majors have an additional three-credit Communication Intensive built into their major requirements, separate from the general CI requirement.

## Additional Requirements

### Arts and Sciences Electives (15 Credits)

Course	Title	Credits
Select five Arts & Sciences elective courses		15
<b>Total Credits</b>		<b>15</b>

### Unrestricted Electives (24 Credits)

Course	Title	Credits
Select eight elective courses		24
<b>Total Credits</b>		<b>24</b>

## Total: 120 Credits