

COMPUTER SCIENCE (BS)

Degree Requirements

Code	Title	Hours
General Education Requirements		
Select General Education Requirements (p. 2)		42
Major Requirements		
<i>Computer Science Core and Electives (a minimum grade of 'C' is required in all courses)</i>		
A. Complete the following:		
CIS 101	Freshman Seminar CIS	2
CSC 120	Prob Solv and Prog Concepts	4
CSC 228	Digital Logic Computer Arch	3
CSC 231	Intro Data Structures Algs	4
CIS 300	Information Tech in Society	1
CSC 311	Networking and Communications	3
CSC 320	Computer Org-Architect	3
CSC 322	Operating Systems	3
CSC 331	Software Engineering Prin - W	3
CSC 332	Adv Data Structures and Algs	3
CSC 333	Prog Language Theory	3
CSC 399	Conc and Distributed Comp	3
CSC 440	Secure Software Engineering	3
CSC 434	Form Lang - Automata Theory	3
CIS 497	Senior Capstone Experience-W	3
CIS 498	CIS Senior Seminar	0
B. Select 12 elective hours from the following:		12
CSC 410	Compiler Design-Construction	
CSC 412	Real-Time Software Systems	
CSC 413	Computer Graphics	
CSC 416	AI Theory and Programming	
CSC 417	Computer Game Development	
CSC 418	Adv Game & Simulation Dev	
CSC 426	Data Mining	
CSC 428	Introduction to Bioinformatics	
CSC 433	Adv AI Theory and Programming	
CSC 450	Surreptitious Software	
CSC 457	Data Warehousing	
CSC 460	Security of HW Implementations	
CSC 485	Cyber-Physical Security	
CSC 490	Special Topics	
CIS 324	Database Design-Dev-Mgt (see footnote table below (p. 3)) ¹	
or CSC 324	Database Concepts	
CIS 494	Directed Studies	
ISC 472	Advanced Data Management	
<i>Additional Program Specific Requirements (a minimum grade of 'C' is required in all courses)</i>		
A. Additional Writing and Communications Requirements		
CA 275	Decision Making - Small Groups	3
EH 372	Technical Writing - W	3
B. Additional Math Requirements		

a. 10 Hours:

MA 126	Calculus II	4
MA 267	Discrete Math Structures	3
ST 315	Applied Probability-Statistics	3

b. 6 elective hours from:

MA 227	Calculus III	
MA 237	Linear Algebra I	
MA 238	Differential Equations I	
MA 311	Intro to Number Theory	
MA 316	Linear Algebra II	
MA 320	Foundations of Math - W	
MA 321	Elementary Geometry	
MA 332	Differential Equations II	
MA 334	Advanced Calculus I	
MA 335	Advanced Calculus II	
MA 354	Comp Assist Math Modeling - W	
MA 367	Combinatorial Enumeration	
MA 410	History of Mathematics - W	
MA 413	Abstract Algebra I - W	
MA 414	Abstract Algebra II - W	
MA 434	Topology	
MA 436	Numerical Analysis	
MA 437	Complex Variables	
MA 451	Probability	
MA 458	Operations Research - W	
MA 467	Mathematical Logic	
MA 481	Cryptography	
MA 490	Special Topics	

C. Additional Science Requirements (cannot be lower level course from same sequence taken in Area III)

BLY 121 & 121L	General Biology I and General Biology I Lab	4
BLY 122 & 122L	General Biology II and General Biology II Laboratory	
CH 131 & 131L	General Chemistry I and General Chemistry I Lab	
CH 132 & 132L	General Chemistry II and General Chemistry II Lab	
GEO 101 & 101L	Environmental Geography and Environmental Geography Lab	
GEO 102 & 102L	Earth and the Environment and Earth and the Environment Lab	
GY 111 & 111L	Physical Geology and Physical Geology Lab	
GY 112 & 112L	Earth History and Earth History Lab	
MAS 134 & 134L	Ocean Science and Ocean Science Lab	
PH 101 & 101L	Introduction to Astronomy and Introduction to Astronomy Lab	
PH 201 & 201L	Calculus-Based Physics I and Calculus-Based Physics I Lab	
PH 202 & 202L	Calculus-Based Physics II and Calculus-Based Physics II Lab	

Minor Requirements

A minor is not required for this degree program 0

Total Hours 124**General Education Requirements****Code Title Hours****Area I - Written Composition**

A. Complete the following:

EH 101 English Composition I 3

B. Complete the following:

EH 102 English Composition II 3

Area II - Humanities & Fine Arts

A. Complete the following:

CA 110 Public Speaking 3

B. Select one of the following: see footnote table below (p. 3)² 3

EH 215 Brit Lit before 1785

EH 216 Brit Lit after 1785

EH 225 Am Lit before 1865

EH 226 Am Lit after 1865

EH 235 World Lit before 1650

EH 236 World Lit after 1650

C. Select one of the following: 3

ARH 100 Survey of Art

ARH 103 Art History I

ARH 123 Art History II

ARS 101 Art Appreciation

DRA 110 Introduction to Theatre

MUL 101 Introduction to Music

D. Select three hours from the following: 3

AFR 101 Intro to African Amer Studies

ARH 100 Survey of Art

ARH 103 Art History I

ARH 123 Art History II

ARH 203 Survey of Non-Western Art

ARS 101 Art Appreciation

CLA 110 Intro Anc Greek Roman Culture

DRA 110 Introduction to Theatre

EH 215 Brit Lit before 1785

EH 216 Brit Lit after 1785

EH 225 Am Lit before 1865

EH 226 Am Lit after 1865

EH 235 World Lit before 1650

EH 236 World Lit after 1650

LG 101 Introductory Latin I

LG 102 Introductory Latin II

LG 111 Introductory French I

LG 112 Introductory French II

LG 121 Introductory Chinese I

LG 122 Introductory Chinese II

LG 131 Introductory Spanish I

LG 132 Introductory Spanish II

LG 141 Intro Classical Greek I

LG 142 Intro Classical Greek II

LG 151 Introductory German I

LG 152 Introductory German II

LG 153 Accelerated Intro German

LG 171 Introductory Russian I

LG 172 Introductory Russian II

LG 173 Accelerated Intro Russian

LG 201 Intermediate Latin I

LG 202 Intermediate Latin II

LG 211 Intermediate French I

LG 212 Intermediate French II

LG 213 Accelerated Inter French - H

LG 221 Intermediate Chinese I

LG 222 Intermediate Chinese II

LG 231 Intermediate Spanish I

LG 232 Intermediate Spanish II

LG 234 Inter Spanish Accel -H

LG 241 Interm Classical Greek I

LG 242 Interm Classical Greek II

LG 251 Intermediate German I

LG 252 Intermediate German II

LG 271 Intermediate Russian I

LG 272 Intermediate Russian II

LG 273 Intensive Second Year Russian

LGS 101 Introductory Japanese I

LGS 102 Introductory Japanese II

LGS 106 Introductory Arabic I

LGS 107 Introductory Arabic II

LGS 110 Intro American Sign Language I

LGS 111 Intro American Sign Lang II

LGS 171 Introductory Korean I

LGS 172 Introductory Korean II

LGS 201 Intermediate Japanese I

LGS 202 Intermediate Japanese II

LGS 206 Intermediate Arabic I

LGS 207 Intermediate Arabic II

LGS 210 Intermediate ASL I

LGS 211 Intermediate ASL II

MUL 101 Introduction to Music

PHL 110 Introduction to Philosophy

PHL 120 Critical Thinking

PHL 121 Introduction to Logic

PHL 131 Introduction to Ethics

PHL 231 Social Ethics

PHL 240 Western Philosophy: Classical

REL 100 Intro to the Study of Religion

REL 200 Old Testament/Hebrew Bible

REL 201 Survey of the New Testament

Area III – Natural Sciences & Mathematics (a minimum grade of 'C' is required in all courses)

A. Complete the following:

MA 125 Calculus I

B. Select an eight hour sequence from the following: see footnote table below (p. 3)³ 8

BLY 121 & 121L & BLY 122 & BLY 122L	General Biology I and General Biology I Lab and General Biology II and General Biology II Laboratory
CH 131 & 131L & CH 132 & CH 132L	General Chemistry I and General Chemistry I Lab and General Chemistry II and General Chemistry II Lab
GY 111 & 111L & GY 112 & GY 112L	Physical Geology and Physical Geology Lab and Earth History and Earth History Lab
PH 201 & 201L & PH 202 & PH 202L	Calculus-Based Physics I and Calculus-Based Physics I Lab and Calculus-Based Physics II and Calculus-Based Physics II Lab

Area IV – History, Social & Behavioral Sciences see footnote table below (p. 3)²

A. Select one of the following: 3

HY 101	HY of Western Civilization I
HY 102	HY of Western Civilization II
HY 135	US History to 1877
HY 136	US History since 1877

B. Select three of the following: 9

AN 100	Intro to Cultural Anthropology
AN 101	Intro Archaeology-Bio Anthro
CA 100	Intro to Communication
CA 211	Interpersonal Comm
CJ 105	Introduction to Criminal Justice
ECO 215	Prin of Microeconomics
ECO 216	Prin of Macroeconomics
GEO 114	People, Places, Environment
GEO 115	World Regional Geography
GS 101	Intro to Gender Studies
HY 101	HY of Western Civilization I
HY 102	HY of Western Civilization II
HY 135	US History to 1877
HY 136	US History since 1877
IS 100	Global Issues
IST 201	Seasons of Life
NAS 101	Intro Native American Studies
PSC 130	Intro to US Government
PSY 120	Introduction to Psychology
PSY 250	Life Span Development
SY 109	Introductory Sociology
SY 112	Social Problems

Area V

No Area V requirements

Total Hours 42

Footnote

¹ Credit for both CIS 324 & CSC 324 is not allowed.

² Students must complete a 6 credit hour sequence either in literature (Area II – EH 215 & EH 216, EH 225 & EH 226, or EH 235 & EH 236) or history (Area IV – HY 101 & HY 102 or HY 135 & HY 136).

³ Students must complete a 8-hour sequence in natural science (Area III – (BLY 121 / BLY 121L and BLY 122 / BLY 122L), or (CH 131 / CH 131L and CH 132 & CH 132L), or (GY 111 / GY 111L and GY 112 / GY 112L), or (PH 201 / PH 201L and PH 202 / PH 202L))

Notes:

- All undergraduates must complete two designated writing credit (W) courses, at least one of which must be in the student's major.
- A minimum grade of 'C' is required for all courses in the CS major's block, to include all *Additional Program Specific Requirements*, as well as math and physical science courses from *General Education Area III*.

Graduation Plan

(124 Total Hours)

Course	Title	Hours
First Year		
Fall		
CSC 120	Prob Solv and Prog Concepts	4
CIS 101	Freshman Seminar CIS	2
CA 275	Decision Making - Small Groups	3
MA 125	Calculus I	4
EH 101	English Composition I	3
Hours		16
Spring		
CSC 231	Intro Data Structures Algs	4
CSC 228	Digital Logic Computer Arch	3
CA 110	Public Speaking	3
MA 126	Calculus II	4
EH 102	English Composition II	3
Hours		17
Second Year		
Fall		
CSC 331	Software Engineering Prin - W	3
CSC 311	Networking and Communications	3
MA 267	Discrete Math Structures	3
Nat Sci/Lab	Area III	4
Humanities/Hist	Area II or Area IV	3
Hours		16
Spring		
CSC 320	Computer Org-Architect	3
CSC 332	Adv Data Structures and Algs	3
CSC 322	Operating Systems	3
Math Elective	Approved Math Elective	3
Nat Sci/Lab	Area III	4
Hours		16
Third Year		
Fall		
CIS 300	Information Tech in Society	1
CSC 333	Prog Language Theory	3
CSC 399	Conc and Distributed Comp	3
Lit/Hist	Area II or Area IV	3
Nat Sci/Lab	Approved Natural Science Elective	4
Fine Arts/Hum Elective	Area II	3
Hours		17
Spring		
CSC 434	Form Lang - Automata Theory	3

4 Computer Science (BS)

CS Elective	Computer Science Elective	3
Social Science	Area IV, B	3
Math Elective	Approved Math Elective	3
Fine Arts/Hum	Area II Elective	3
Hours		15
Fourth Year		
Fall		
EH 372	Technical Writing - W	3
CSC 440	Secure Software Engineering	3
CS Elective	Computer Science Elective	3
CS Elective	Computer Science Elective	3
Social Science	Area IV, B	3
Hours		15
Spring		
CIS 497	Senior Capstone Experience-W	3
CIS 498	CIS Senior Seminar	0
ST 315	Applied Probability-Statistics	3
CS Elective	Computer Science Elective	3
Lit/Hist	Area II or Area IV	3
Hours		12
Total Hours		124