

## Computer Science (B.S.)

A minor is not required.

### Area I: General Requirements (24 credits from the following three components)

1. Mathematics and Statistics Components (15 credits required)				
	CS 245	Statistics with Application in Computer Science	(CS 116; MATH 120B or MATH 140 or higher)	4 cr [FA, SU]
{GE 3}	MATH 161	Calculus I	(MATH 140 or placement test)	4 cr
	MATH 223	Matrix Algebra	(MATH 161)	4 cr
	MATH 300	Discrete Math Structures	(MATH 161)	3 cr
2. Communications Skill Component (6 credits required)				
{GE 9}	COMM 105A	Fundamentals of Communication	(None)	3 cr
	RPW 304	Technical Report Writing	(ENGL 111; ENGL 212 or other GE 10 course)	3 cr
3. Ethics Component (Take one course - 3 credits required)				
{GE 5;CI}	PHIL 205A	Professional Ethics: Business	(ENGL 111)	3 cr
{GE 5}	PHIL 210B	Applied Ethics in Engr and Computer Tech	(ENGL 111)	3 cr

### Area II: Computer Science Requirements (63 credits required)

CS 105	Introduction to Computers and Programming	(None)	4 cr	[FA, WI]
CS 116	Computer Programming I	(MATH 103 or placement test, CS 105)	4 cr	[FA, WI]
CS 146	Visual Basic.NET Programming	(CS 105 which can be taken concurrently)	3 cr	[FA, WI]
CS 216	Computer Programming II	(CS 116; MATH 120A, 120B, 140 or 161)	4 cr	[FA, WI]
CIS 255	Client Side Web Application Development	(CS 116)	4 cr	[FA, SP]
CS 316	Data Structures and Algorithm Analysis	(CS 216; MATH 300 can be concurrent)	4 cr	[FA]
CS 331	Computer Organization and Assembly Language	(CS 216)	4 cr	[WI]
CIS 355	Server Side Web Application Development	(CS 216; CIS 255)	4 cr	[WI, SU]
CIS 357	Advanced Programming with Java	(CS 216)	4 cr	[WI, SP]
CS 401	Computer Networks	(CS 331)	4 cr	[FA]
CS 411	Database Systems	(CS 216)	4 cr	[WI]
CS 421	Object-Oriented Design and Development	(CIS 355; CIS 357; CS 401; CS 411)	4 cr	[FA]
CS 446	Operating Systems	(CS 331)	4 cr	[WI]
CS 451	Programming Language Concepts	(CS 316)	4 cr	[WI]
CS 461	Theory of Computation	(CS 316)	4 cr	[FA]
CS 471	Senior Computer Science Capstone	(CS 421)	4 cr	[WI]

### Area III: Computer Science Electives (Take two courses – 8 credits required)

CIS 311	Windows Programming with VB.NET	(CS 146; CS 216)	4 cr	[WI]
CS 333	Computer Forensics	(CS 216; CS 232; CS 233)	4 cr	[FA]
CS 345	UNIX & System Administration	(CS 216)	4 cr	[SP]
CS 403	Mobile Application Development	(CIS 355; CIS 301 or CS 401)	4 cr	[FA]
CS 431	Computer Architecture	(CS 331)	4 cr	[Varies]
CS 476	Computer Graphics	(CS 316)	4 cr	[Varies]
CS 482	Artificial Intelligence and Expert Systems	(CS 216)	4 cr	[Varies]
CS 490	Special Topics	(Varies)	4 cr	[Varies]
One course from the MS-CSIS Program			Will count as 4 cr	[Varies]

### Legend:

Items in [ ] indicate semesters in which CSIS courses are offered

Items in ( ) indicate the prerequisites to a specific course

Items in { } indicate that a course can be used toward a specific general education category