

# Computer Science, Big Data 18-19 Catalog

Freshman Fall Semester				Freshman Spring Semester			
COSC	1010	Intro to Programming	4	COSC	1030	Computer Science I	4
MATH	2200	Calculus I	4	MATH	2205	Calculus II	4
		Science Course (note 1)	4			Science Course (note 1)	4
	1101	First Year Seminar (note 2)	3			Comm Course (COM1)	3
15				15			
Sophomore Fall Semester				Sophomore Spring Semester			
COSC	2150	Computer Organization	3	COSC	3011	Software Design	3
COSC	2030	Computer Science II	4	COSC	3020	Algorithms	4
COSC	2300	Discrete Structures	3	MATH	2250	Linear Algebra	3
		Humanities Course I	3			Humanities Course II	3
		Comm Course (COM2)	3			US & Wyo Constitution (V)	3
16				16			
Junior Fall Semester				Junior Spring Semester			
COSC	3015	Functional Programming	3	COSC	3050	Ethics	1
COSC	4550	Intro to AI	3	COSC	4750	Data Mining	3
COSC		O/S Course (note 3)	3	COSC		Theory Course (note 4)	3
STAT		Statistics (note 5)	4	COSC	4820	Database Systems	3
		Elective I (note 6)	3			Elective II (note 6)	3
				STAT	3050	Statistical Methods	3
16				16			
Senior Fall Semester				Senior Spring Semester			
COSC	4950	Senior design I	1	COSC	4955	Senior Design II	2
COSC	4450	Graphics	3	COSC	4555	Machine Learning	3
COSC		Prog Lang Course (note 7)	3	STAT		Statistics Course (note 8)	3
STAT		Statistics Course(note 8)	3	STAT		Statistics Course (note 8)	3
		Comm Course (COM3)	3			Application Area Course (note 9)	3
14				14			

## NOTES

**A minimum of 120 hours is required for the degree, 30 hours of math and science.**

**All COSC, MATH, and STAT courses require a grade of C or better.**

Note 1 4-Hour PN course, for science majors, must have a lab.

Note 2 Any FYS, any department. Must complete in first year.

Note 3 One of COSC 4740 (fall) or COSC 3750 (spring).

Note 4 One of COSC 4100 or COSC 4200 (spring).

Note 5 One of STAT 2010, 2050, 2070.

Note 6 Either prerequisite course needed for chosen Application Area course or Up. Div. COSC elective. Note only 3 hours of COSC 3970 can count toward degree.

Note 7 One of COSC 4785 (fall) or COSC 4780 (spring).

Note 8 Statistics course required for Statistics Minor. See Statistics Department catalog pages.

Note 9 Choose an Application Area course from: MOLB 4495, BOT 4550, CHEM 4560, GEOG 4220, PHYS 4830. Student's responsibility that prerequisites are met for this course.