

Montana Tech of the University of Montana
Bachelor of Science in Data Science

Name: _____

2017-2018

Fall Semester			Credits	Sem	Grade	Spring Semester			Credits	Sem	Grade
FRESHMAN YEAR											
M 171	Calculus I	3	_____	_____	COMX 111	Public Speaking**	3	_____	_____		
CSCI 102	Computational Thinking	3	_____	_____	M 172	Calculus II	3	_____	_____		
CSCI 135	Fund. of Computer Science I	3	_____	_____	CSCI 136	Fund. of Computer Science II	3	_____	_____		
WRIT 121	Intro to Technical Writing	3	_____	_____	*	<i>Science Elective</i>					
*	<i>Science Elective</i>						4	_____	_____		
		3	_____	_____		<i>Humanities Elective</i>					
	Total Credits	15	_____	_____			3	_____	_____		
							Total Credits	16	_____	_____	
SOPHOMORE YEAR											
M 273	Multivariable Calculus	3	_____	_____	M 274	Intro. To Diff. Equations	3	_____	_____		
M 333	Matrices & Linear Algebra	4	_____	_____	STAT 332	Stats for Scientists & Engin	3	_____	_____		
CSCI 232	Data Struct & Algorithms	3	_____	_____	CSCI 332	Design and Analysis of Algorithms	3	_____	_____		
CSCI 246	Discrete Structures	3	_____	_____	CSCI 340	Database Design	3	_____	_____		
	<i>Humanities Elective</i>					<i>Free Elective</i>					
		3	_____	_____			3	_____	_____		
	Total Credits	16	_____	_____			Total Credits	15	_____	_____	
JUNIOR YEAR											
STAT 421	Probability Theory	3	_____	_____	STAT 422	Mathematical Statistics	3	_____	_____		
CSCI 347	Data Mining	3	_____	_____	STAT 432	Regression & Model Building	3	_____	_____		
ESOF 322	Software Engineering	3	_____	_____	STAT 456	Bayesian Statistical Inference	3	_____	_____		
ECNS 203	Princ. of Micro & Macro	3	_____	_____	CSCI 444	Data Visualization	3	_____	_____		
	<i>Free Elective</i>				***	<i>Free Elective</i>					
		3	_____	_____			3	_____	_____		
	Total Credits	15	_____	_____			Total Credits	15	_____	_____	
SENIOR YEAR											
STAT 441	Experimental Design	3	_____	_____	STAT 435	Statistical Computing & EDA	3	_____	_____		
STAT 453	Statistical Learning & Data Science I	3	_____	_____	STAT 454	Statistical Learning & Data Science II	3	_____	_____		
CSCI 446	Artificial Intelligence	3	_____	_____	CSCI 447	Machine Learning	3	_____	_____		
WRIT 321W	Advanced Technical Writing**	3	_____	_____	STAT 499	Capstone: Data Science Project or					
***	<i>Free Elective</i>				CSCI 499	Capstone: Data Science Project	4	_____	_____		
		3	_____	_____			Total Credits	13	_____	_____	
	Total Credits	15	_____	_____							

Minimum credits for B.S. degree in Data Science = 120

- * Science Electives must include at least one semester of laboratory science, either (1) BIOB 101/102, 160/161, BIOC 235, or BIOH 201/202; (2) CHMY 121 with lab or CHMY 141 with lab 142; (3) GEO 101 with lab GEOE 104 or GEO 209; or (4) PHSX 234 and PHSX 235 with lab 236.
- ** COMX 211 Adv. Public Speaking or COMX 230 Presenting Technical Information can replace COMX 111. WRIT 325W Writing in the Sciences or WRIT 322W Advanced Business Writing can replace WRIT 321W
- *** Recommended electives include M 410 Numerical Computing, M 426 Mathematical Modeling, CSCI 477 Computer Simulation and Modeling, or BMIS 491 Business Intelligence & Analytics

The sequence STAT 421-422 and the courses STAT 432 & STAT 435 are offered on alternate year basis.