

Montana Tech of the University of Montana
Bachelor of Science in COMPUTER SCIENCE
 with
 Control Systems Emphasis
 Mathematical Science Emphasis
 Business Applications Emphasis

2001-2002 CATALOG

Fall Semester

Spring Semester

FRESHMAN YEAR

			Credits	
C.S.	2106	Intro to Computer Sci. I	3	_____
Math	1520	Calculus I OR		_____
Math	1516	Calculus I w/ Alg. Enhanc.	3/4	_____
Engl.	1046	English Comp.	3	_____
*		Humanities Elective		_____
			3	_____
*		Social Science Elective		_____
			3	_____
Total Credits			15/16	

			Credits	
C.S.	2116	Intro to Computer Sci. II	3	_____
Math	1530	Calculus II	3	_____
HSS	1216	Principles of Speaking OR		_____
HSS	1226	Public Speaking	2	_____
*		Social Science Elective		_____
			3	_____
**		Science Elective		_____
			3	_____
		Free Elective		_____
			2	_____
Total Credits			16	

SOPHOMORE YEAR

C.S.	3166	Discrete Structures	3	_____
C.S.	3546	UNIX, C, & C++	3	_____
Math	2510	CALCULUS III	4	_____
Math	3256	Matrices & Lin. Algebra	3	_____
**		Science Elective		_____
			3	_____
Total Credits			16	

C.S.	2156	Assembly Language	3	_____
C.S.	3316	Data Struct & Algo. I	3	_____
Math	2236	Elem. Diff. Equations	3	_____
*		Humanities Elective		_____
			3	_____
**		Science Elective		_____
			3	_____
Total Credits			15	

JUNIOR YEAR

C.S.	3326	Data Struct. & Algo. II	3	_____
C.S.	3256	Software Engineering I	3	_____
Math	3316	Intro. Statistical Methods	3	_____
**		Science Elective		_____
			3	_____
***		Professional Elective		_____
			3	_____
Total Credits			15	

C.S.	3266	Software Engineering II	3	_____
C.S.	3406	Operating Systems	3	_____
C.S.	3656	Database Management	3	_____
Math	4106	Numerical Computing	3	_____
***		Professional Elective		_____
			3	_____
Total Credits			15	

SENIOR YEAR

C.S.	4386	Theory of Computation	3	_____
C.S.	4526	Networking Principles	3	_____
C.S.	4606	Senior Design Project OR		_____
C.S.	4916	Internship	2	_____
Engr	3210	Sci. & Tech. Writing OR		_____
Engl.	3896	Bus. & Prof. Writing	3	_____
***		Professional Elective		_____
			3	_____
Total Credits			14	

C.S.	4016	Programming Lang.	3	_____
C.S.	4406	Computer Architecture	3	_____
C.S.	4556	Artificial Intelligence	3	_____
C.S.	4606	Senior Design Project OR		_____
C.S.	4916	Internship	2	_____
***		Professional Elective		_____
			3	_____
Total Credits			14	

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

* Electives must be chosen so that the General Education Requirements are met (6 credits in Social Sciences & 6 credits in Humanities).

** Science electives must include a two-semester sequence of laboratory science (min. of 12 credits total). Either (1) BIOL 1116, 1216, or 1326 and BIOL 2106 & 3106; (2) Chem 1056 w/ lab 1136, Chem 1066 w/ lab 1166 plus 4 more science credits; (3) GeoE 1010, Geol 2020 plus 5 more science credits; (4) Phys 1046, 2076 w/ lab 2096, & Phys 2086 w/ lab 2106 plus 1 more science credit (**Take Phys sequence for CONTROL SYSTEMS OPTION.**)

*** Professional electives are the classes that meet the Computer Science degree options. (Professional electives on other side.)

COMPUTER SCIENCE DEGREE OPTIONS

Professional Electives --- Junior and Senior Years

2001-2002 CATALOG

Control Systems

			<u>Fall</u>	<u>Spring</u>
Junior Year				
	PHYS 3036	Electronics	3	
	ENGR 3530	Electric Circuits & Power		3
Senior Year				
*	ENGR 4456	Design Concepts for Instrumentation & Control Systems	4	
*	ENGR 4406	Introduction to Control Systems		3
*	ENGR 4276	Digital Systems Design		3
*	PHYS 4806	Microprocessors		3

* select 2 courses out of 4

Mathematical Science

			<u>Fall</u>	<u>Spring</u>
Junior Year				
*	MATH 4056	Advanced Engineering Math	3	
	MATH 4066	Advanced Engineering Math		3
Senior Year				
*	MATH 4336	Probability Theory	3	
	MATH 4346	Statistical Theory		3
*	MATH 4416	Numerical Analysis and Techniques of Computation	3	
	MATH 4426	Numerical Analysis and Techniques of Computation		3

* select 2 sequences out of 3

Business Applications

			<u>Fall</u>	<u>Spring</u>
Junior Year				
	BUS 2146	Accounting I	3	
	BUS 2156	Accounting II		3
Senior Year				
*	BUS 3416	Business Law I	3	
*	BUS 3616	Management	3	
*	BUS 3316	Marketing		3
*	BUS 3516	Business Finance		3

* select 2 courses out of 4