

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

**2003-2004 CATALOG**

**Fall Semester**

<b>FRESHMAN YEAR</b>		Credits
C.S. 1006	C.S./S.E. Freshman	1 _____
C.S. 2106	Intro to Computer S	3 _____
Math 1520	Calculus I OR	_____
Math 1516	Calculus I w/ Alg. E	3/4 _____
Engl. 1046	English Comp.	3 _____
*	Humanities Elective	_____
		3 _____
*	Social Science Elective	_____
		3 _____
<b>Total Credits</b>		<b>16/17</b>

**Spring Semester**

		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	_____
		1 _____
<b>Total Credits</b>		<b>15</b>

**SOPHOMORE YEAR**

C.S. 3166	Discrete Structures	3 _____
C.S. 3546	UNIX, C, & C++	3 _____
Math 2510	Calculus III	4 _____
Math 3256	Matrices & Lin. Alg	3 _____
**	Science Elective	_____
		3 _____
<b>Total Credits</b>		<b>16</b>

C.S. 2156	Assembly Language	3 _____
C.S. 3316	Data Struct & Algo. I	3 _____
Math 2236	Elem. Diff. Equations	3 _____
C.S. 3656	Database Management	3 _____
**	Science Elective	_____
		3 _____
<b>Total Credits</b>		<b>15</b>

**JUNIOR YEAR**

C.S. 3326	Data Struct. & Algo	3 _____
C.S. 3256	Software Engineeri	3 _____
Math 3316	Intro. Statistical Me	3 _____
**	Science Elective	_____
		3 _____
***	Professional Elective	_____
		3 _____
<b>Total Credits</b>		<b>15</b>

C.S. 3266W	Software Engineering II	3 _____
C.S. 3406	Operating Systems	3 _____
C.S. 4016	Programming Lang.	3 _____
*	Humanities Elective	_____
		3 _____
***	Professional Elective	_____
		3 _____
<b>Total Credits</b>		<b>15</b>

**SENIOR YEAR**

C.S. 4386	Theory of Computa	3 _____
C.S. 4526	Networking Princip	3 _____
C.S. 4606	Senior Design Project OR	_____
C.S. 4916	Internship	2 _____
Engr 3210W	Sci. & Tech. Writin	3 _____
***	Professional Elective	_____
		3 _____
<b>Total Credits</b>		<b>14</b>

Math 4106	Numerical Computing	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 _____
<b>Total Credits</b>		<b>14</b>

*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 1086, 1096, or 1116 plus 4 more science credits; (2) CHEM 1056 w/ lab 1136, CHEM 1066 w/ lab 1166 plus 4 more science credits; (3) GEOE 1010, GEOL 2020 plus 6 more science credits; (4) PHYS 1046, 2076 w/ lab 2096, and PHYS 2086 w/ lab 2106 plus 1 more science credit. (Take PHYS sequence for the **Control Systems Emphasis**.)  
 \*\*\* Professional electives are the classes that meet the Computer Science degree options. (Professional electives on other side.)  
 \*\*\*\* PTC 3216W Scientific & Technical Writing, PTC 3256W Scientific Report Writing, or PTC 3896W Business & Professional Writing can replace Engr. 3210W.

# COMPUTER SCIENCE DEGREE OPTIONS

Professional Electives --- Junior and Senior Years

## 2003-2004 CATALOG

### Control Systems

<i>Junior Year</i>			<u>Fall</u>	<u>Spring</u>
PHYS	3036	Electronics	3	
ENGR	2530	Intro. to Electric Circuits		3
<i>Senior Year</i>				
*	ENGR	3270	Digital Circuit Design	3
*	ENGR	3500	Intro. to Signals & Systems	3
*	ENGR	3560	Electric Circuits II	3
*	ENGR	3570	Electronic Design	3
*	ENGR	4410	Control System Theory & Design	3
*	ENGR	4450	Process Instrumentation & Control	3
*	PHYS	4806	Intro. to Microprocessors	3

\* select 2 courses out of 7

### Business Applications

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

\* select 2 courses out of 4