

The University of Montana
 Department of Mathematical Sciences
 Name _____
 Email _____

Date _____
 ID 790 - - _____
 Catalog for Graduation _____
 Math Advisor _____
 CS Advisor _____

Advising Worksheet (2008-2009 Catalog)
Updated with the New Course Numbers

B.S. Combined Major in Mathematical Sciences - Computer Science

• **General Education Requirements:**

Fill out a General Education Worksheet

• **Grade Requirement:** Beginning with the 2005-2006 Catalog, all courses taken to satisfy the requirements of the major must be completed with a grade of C- or better. This applies to all courses listed on this worksheet!

	<u>Course no.</u>	<u>Name</u>	<u>Credit</u>	<u>Term</u>	<u>Grade</u>
• Non-Math/CS Courses					
(1) One of the sequences:	BIOL 108N, 109N, 110N	or CHEM 161N, 162N			
	or PHYS 211N & 213N (was 221N)	, 212N & 214N (was 222N):			
	_____	_____	()	_____	_____
	_____	_____	()	_____	_____
	_____	_____	()	_____	_____
(2) The course:	WRIT 222 = FOR 220	Technical Approach to Writing	(2)	_____	_____
(3) COMM 111A	or COMM 242	(circle one)	(3)	_____	_____
(4) Upper division writing requirement (in consultation with advisor)					
	_____	_____	()	_____	_____
• Core Math Courses					
	M 171 = MATH 152	Calculus I	(4)	_____	_____
	M 172 = MATH 153	Calculus II	(4)	_____	_____
	M 221 = MATH 221	Introduction to Linear Algebra	(4)	_____	_____
	M 273 = MATH 251	Multivariable Calculus	(4)	_____	_____
	M 307 = MATH 305	Introduction to Abstract Mathematics			
	(or M 225 = MATH 225	Discrete Mathematics)	(3)	_____	_____
• Core CS Courses					
	CS 121	Careers in Computer Science	(1)	_____	_____
	CS 131	Fundamentals of Computer Science I	(3)	_____	_____
	CS 132	Fundamentals of Computer Science II	(3)	_____	_____
	CS 241	Data Structures	(4)	_____	_____
	CS 242	Programming Languages	(4)	_____	_____
	CS 281	Computer Architecture & Assembly Language Prog.	(3)	_____	_____
	CS 332	Algorithms	(3)	_____	_____

• **Other Math-CS Courses:**

Each student plans a program in consultation with a mathematical sciences advisor **and** a computer science advisor.

For your choice of electives, consider the suggested curricula listed below.

<u>Course no.</u>	<u>Name</u>	<u>Credit</u>	<u>Term</u>	<u>Grade</u>
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Twelve Credits of M/STAT/MATH Electives* selected from 3- or 4-credit courses numbered above 307 (not including courses numbered 390-399 and 490-499).

M/STAT/MATH	_____	()	_____	_____
M/STAT/MATH	_____	()	_____	_____
M/STAT/MATH	_____	()	_____	_____
M/STAT/MATH	_____	()	_____	_____

Nine Credits of CS Electives* selected from courses numbered 300 and above. A total of at most three of the nine credits of CS electives may be in CS 398 or 498.

CS	_____	()	_____	_____
CS	_____	()	_____	_____
CS	_____	()	_____	_____

* **Note:** The 12 credits of M/STAT/MATH electives and the 9 credits of CS electives must include at least three 3- or 4- credit courses numbered 400 or above, with at least one chosen from each department (not including M 429 [=MATH 406], nor STAT 451, 452 [=MATH 444, 445].)

M/STAT/MATH/CS	4	_____	()	_____	_____
M/STAT/MATH/CS	4	_____	()	_____	_____
M/STAT/MATH/CS	4	_____	()	_____	_____

- **The Upper-Division Writing Requirement** is one of the following: CS 415E, M 429 [=MATH 406], any other approved General Education upper-division writing course, or a senior thesis (CS 499 or M 499 [=MATH 499]).

• **Suggested Curricula**

Applied Math-Scientific Programming: Three courses chosen from CS 344, 446, 471, 477, 486. In addition:

New Course Numbers: M 311, 412, 414, and one of M 381, 440, 472, 473, STAT 341.
Old Course Numbers: MATH 311, 412, 414, and one of MATH 351, 471, 452, 451, 341.

Combinatorics and Optimization-Artificial Intelligence: CS 344, 455, and 457. In addition:

New Course Numbers: M 361, 362, and two of M 325, 414, 485, STAT 341.
Old Course Numbers: MATH 381, 382, and two of MATH 325, 414, 485, 341.

Statistics-Machine Learning: Three courses chosen from CS 365, 455, 457, 458, and 486. In addition:

New Course Numbers: STAT 341, 421, and two of STAT 422, M 325, 362, 485.
Old Course Numbers: MATH 341, 441, and two of MATH 442, 325, 382, 485.

Algebra-Analysis: CS 344, 441, and one other upper-division CS course. In addition:

New Course Numbers: M 381, 431, and two of M 326, 432, 472, 473.
Old Course Numbers: MATH 351, 421, and two of MATH 326, 422, 452, 451.