

# Individualized Mathematics Proposal (IMaP) for a Math Major

Name: \_\_\_\_\_ E-mail: \_\_\_\_\_

Graduation year: \_\_\_\_\_ Advisor: \_\_\_\_\_

Major(s) \_\_\_\_\_ Concentration(s) \_\_\_\_\_

Do you plan to get a mathematics (grades 5-12) teaching license? Yes \_\_\_\_ No \_\_\_\_

Write a brief statement about your reasons for majoring in mathematics and ideas about your post-graduate plans.

List outside-the-classroom mathematical activities in which you are participating or planning to participate (for example: MAA, grading, tutoring, attending colloquia, problem solving)

List mathematics, statistics, and computer science courses taken through AP or IB programs or at another college before coming to St. Olaf for which you received St. Olaf credit:

**Directions:** In the sections below, check the courses you plan to take or have taken (since coming to St. Olaf) to complete your math major.

**Basic** (all required unless completed before coming to St. Olaf)

	Course	Term, Year
120	Calculus I	
126/8	Calculus II	
220	Linear Algebra	

Seven courses in addition to the basic courses are required. These must include:

- two transition courses
- one course from three of the following perspectives: Axiomatic/Algebraic (A), Continuous/Analytic (C), Discrete/Combinatorial (D), and Modeling/Computation (M)
- two Level III courses, at least one of which must be a Mathematics course
- a 200-300-level sequence of two courses, at least one of which must be a Mathematics course

A total of *two* approved courses from Statistics or Computer Science can be counted toward the mathematics major. You may be able to count *one* mathematics-related course from another department. If you wish to do so, list the course in the appropriate “other” blank and attach a paragraph explaining why you believe the course should be included as part of your major.

For more information on the requirements, see [www.stolaf.edu/depts/math](http://www.stolaf.edu/depts/math). **NOTE:** Some upper level courses are not offered every semester or even every year. Consult the department chair or the department website for confirmation of an offering during a particular term or year.

**Perspectives** - Circle the perspective letters for the three courses you will use to satisfy the perspectives requirement. A course can only count for one perspective.

**Transition courses** (at least two required)

	Course	Perspectives	Term, Year
242	Modern Computational Mathematics	M	
244	Real Analysis I	C	
252	Abstract Algebra I	A	

**Elective courses**

	Course	Perspectives	Term, Year
226	Multivariable Calculus	C	
230	Introduction to Differential Equations	C, M	
232	Discrete Mathematics	D	
236	Mathematics of Biology	M	
238/239	Number Theory	D	
262	Probability Theory	C, D, M	
266	Operations Research	M	
2xx	Other MATH course #:		
S 212	Statistics for the Sciences	M	
S 272	Statistical Modeling	M	
S 316	Advanced Statistical Modeling	M	
CS 231	Mathematical Foundations of Computing	D	
One of:	Chem 371 or Econ 385 or Phys 374/5/6	n/a	
Other	Name: _____ submit paragraph		

**Level III courses** Two are required: one must be part of a sequence, and at least one must be labeled Math 3xx. Math 390 cannot be the *only* Level III “Math” course in your IMaP.

	Course	Sequence with	Term, Year
330	Differential Equations	230	
340	Complex Analysis	226	
344	Real Analysis II	244	
348	Topology	244	
352	Abstract Algebra II	252	
356	Geometry	220	
364	Combinatorics	232	
382	Topics in Math: (name)	Det. by instr. # _____	
384	Topics in App Math: (name)	Det. by instr. # _____	
390	Mathematics Practicum (by application only)	n/a	
396	Directed Undergraduate Research	Det. by instr. # _____	
3xx	Other MATH course #:		
S 322	Statistical Theory	262	
CS 315	Bioinformatics	n/a	
CS 333	Theory of Computation	n/a	
Other	Name: _____ submit paragraph		

Discuss your IMaP with an MSCS faculty member, then submit this form to Donna Brakke in RMS 307.

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

Faculty Signature \_\_\_\_\_ Date \_\_\_\_\_

Approved by: \_\_\_\_\_ MSCS chair Date: \_\_\_\_\_