

WELCOME TO MATH S-Ar SUMMER 2006

Math S-Ar covers the algebra, graphing, and functions needed for the study of calculus, chemistry, economics, and many other subjects. The course is taught in small sections and we are available for any amount of extra help you might require. Our office is in Science Center 901.

HOMEWORK: Mathematics cannot be absorbed passively, hence problem sets are assigned daily. Take the homework seriously and keep up with it on a daily basis. An honest effort (not necessarily perfection!!) on the homework together with regular class attendance usually results in a good understanding of the material. Homework solutions can be downloaded from [\(TBA\)](#) as they become available.

EXAMS: There will be three two-hour exams and a three-hour final on the following dates:

Thursday, July 6	7:30 p.m.,	Science Center ??
Thursday, July 20	7:30 p.m.,	Science Center ??
Thursday, August 10	7:30 p.m.,	Science Center ??

Wednesday, August 17 9:00 a.m. room T.B.A.

GRADES: The final grade will be calculated based on the homework (20%), the three short tests (15% each or 0%), and the final exam (35% if the grade on the final is lower than the average of the three short tests, 80% otherwise).

TEXT: The text is called Precalculus: Functions Modeling Change, Second Edition, by Eric Connally, Deborah Hughes Hallett, et al., and is available at the Harvard COOP.

CALCULATOR: A graphing calculator (such as TI-82, TI-83, TI-85, TI-89, etc.) will be extensively used and is required. It can be bought at the Harvard Coop. If you already own a graphing calculator, you are welcome to use it but we won't necessarily be able to tell you how to use it since most of us are familiar with the TI's.

The head of the course is Srdjan Divac and his office is in Science Center 435, during the first week, and Science Center 901 thereafter. Questions concerning section changes, time conflicts, etc. should be addressed to him.

Math S-Ar Syllabus

Tuesday, June 27	FUNCTIONS, FUNCTIONAL NOTATION
Wednesday, June 28	RATES OF CHANGE
Thursday, June 29	LINES
Friday, June 30	INEQUALITIES
Monday, July 3	INPUT/OUTPUT OF FUNCTIONS, DOMAIN, RANGE
Tuesday, July 4	HOLIDAY
Wednesday, July 5	PIECEWISE-DEFINED AND INVERSE FUNCTIONS
Thursday, July 6	CONCAVITY AND QUADRATIC F'NS (test 1)
Friday, July 7	EXPONENT ALGEBRA AND EXPONENTIAL F'NS
Monday, July 10	LINEAR VS. EXPONENTIAL FUNCTIONS
Tuesday, July 11	GRAPHS OF EXPONENTIAL FUNCTIONS
Wednesday, July 12	THE NUMBER e AND CONTINUOUS MODELS
Thursday, July 13	LOGS AND THEIR PROPERTIES
Friday, July 14	LOG AND EXPONENTIAL MODELS
Monday, July 17	THE LOGARITHMIC FUNCTION
Tuesday, July 18	SHIFTS, FLIPS, STRETCHES OF GRAPHS
Wednesday, July 19	MORE OF THE ABOVE
Thursday, July 20	QUADRATIC FUNCTIONS (test 2)
Friday, July 21	INTRO TO PERIODIC FUNCTIONS
Monday, July 24	SINE AND COSINE FUNCTIONS
Tuesday, July 25	TRIANGLE DEFINITIONS
Wednesday, July 26	RADIANS, GRAPHS OF SINE, COSINE
Thursday, July 27	SINUSOIDAL FUNCTIONS
Friday, July 28	OTHER TRIG FUNCTIONS
Monday, July 31	INVERSE TRIG FUNCTIONS
Tuesday, August 1	LAW OF SINES AND COSINES
Wednesday, August 2	TRIG IDENTITIES
Thursday, August 3	COMPOSITION OF FUNCTIONS
Friday, August 4	INVERSE FUNCTIONS
Monday, August 7	POWER FUNCTIONS
Tuesday, August 8	POLYNOMIALS
Wednesday, August 9	RATIONAL FUNCTIONS
Thursday, August 10	MORE RATIONAL FUNCTIONS (test 3)
Friday, August 11	REVIEW
Wednesday, August 16	(Final Exam)