

136.102/054.102 Mathematics in Art, January - April 2002

A tentative schedule of topics/tests; some adjustments will be done as we go.

Dr. S. Kalajdzievski, Mathematics (434 Machray Hall, sasho@cc.umanitoba.ca, <http://server.maths.umanitoba.ca/homepages/sasho/CurrentCourses/MathInArt2006/MathInArt.html>)

Professor _____, School of Arts (denoted by S.Art below).

Date	Day #	Topic	Professor	
Jan 3	1	What is math for art? A course overview	S.K.	S. Art
Jan 5	2	Euclidean (ruler, compass) constructions	S.K.	
Jan 10	3	(Levels of Abstraction in Art/Math, Spiral Forms)		S. Art
Jan 12	4	Golden mean, golden rectangles and triangles	S. K.	
Jan 17	5	Fibonacci sequence, spiral constructions	S. K.	
Jan 19	6	(Ordering Principles, Composition Systems)		S. Art
Jan 24	7	Symmetries in the Euclidean Plane	S. K.	
Jan 26	8	(Delineation methods, ratio, proportion)		S. Art
Jan 31	9	Classification of plane symmetries; Planar tilings	S. K.	
Feb 2	10	Geometry of fractals (part 1)	S. K.	
Feb 7	11	(Order & chaos in Art and Design; Art project I)		S. Art
Feb 9	12	Midterm review	S. K.	
Feb 21	13	Midterm Exam (in class)		
Feb 23	14	(Perspective Drawing; Art project 2)		S. Art
Feb 28	15	Perspective geometry	S. K.	
Mar 2	16	Fractals part 2; Conic constructions	S. K.	
Mar 7	17	(Conics and polyhedra in fine arts)		S. Art
Mar 9	18	Five Platonic solids (why only 5?)	S. K.	
Mar 14	19	(Platonic Solids in Fine Arts)		S. Art
Mar 16	20	Hyperbolic geometry	S. K.	
Mar 21	21	Hyperbolic geometry 2; Escher's Art	S. K.	
Mar 23	22	(Lines, Curves and Hyperbolic Art)		S. Art
Mar 28	23	(Topological Transforms in Art and Architecture)		S. Art
Mar 30	24	Topological structures, homotopy and genus	S. K.	
Apr 4	25	(Course summary, concluding remarks)		S. Art
Apr 6	26	Course summary; final exam review	S. K.	
Apr ??		Final Exam (to be scheduled by U of M.)		

Scheme of Evaluation

Art project #1	15%
Mid-Term Exam	25%
Art project #2	25%
Final Exam	35%