PURE MATHEMATICS 319
"TRANSFORMATION GEOMETRY"

Calendar Description: H(3-2T)

Geometric transformations in the Euclidean plane. Frieze patterns. Wallpaper patterns. Tessellations.

Prerequisite: Mathematics 211 or 221 and one other 200-level Mathematics course.

Suggested text: "Transformation Geometry", by G.E. Martin.

Syllabus

Topics	Number of hours
Ch.1: Introduction (geometry and algebra)	3
Ch.2: Transformations	1
Ch.3: Translations and halfturns	3
Ch.4: Reflections	1
Ch.5: Isometries	3
Ch.6: Translations and rotations	2
Ch.7.1: Even isometries	3
Ch.8.1: Glide reflections	2
Ch.7.2 and 8.2: Symmetry	4
Ch.10: Frieze groups	4
Ch.11: Wallpaper groups	6
Student project and presentations	3
Mid-term exam	1
	36

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