Mathematics

MATH 402  Non-Euclidean Geometry  credit: 3 OR 4 hours.
Historical development of geometry; includes tacit assumptions made by Euclid; the discovery of non-Euclidean geometries; geometry as a mathematical structure; and an axiomatic development of plane geometry. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for a:
Quantitative Reasoning II

<table>
<thead>
<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>37929</td>
<td>Lecture-Discussion</td>
<td>E13</td>
<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
<td>24 - Illini Hall</td>
<td>Francis, G</td>
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</tbody>
</table>

Credit Hours: 3 hours
Quant Reasoning II course.
Open to both undergraduate and graduate students.

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<tr>
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<td>37931</td>
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<td>E14</td>
<td>01:00 PM - 01:50 PM</td>
<td>MWF</td>
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Credit Hours: 4 hours
Quant Reasoning II course.
Instructor Approval Required
Not intended for Undergrad - Urbana-Champaign.
Instructor approval forms available in 313 Altgeld Hall.

<table>
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<tr>
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<th>Location</th>
<th>Instructor</th>
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<td>59804</td>
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<td>OC2</td>
<td>ARRANGED -</td>
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Credit Hours: 3 hours
Quant Reasoning II course.
Instructor Approval Required

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<tr>
<td>53324</td>
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<td>OCE</td>
<td>ARRANGED -</td>
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<td>Francis, G Murphy, A</td>
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Quant Reasoning II course.
Restricted to NDEG:Grad Nondegree-CE-UIUC or NDEG:Undergrad Nondeg-CE-UIUC.
Online & Continuing Education (OCE) restrictions and assessments apply, see http://www.oce.illinois.edu. Enrollment in this course section is restricted to off-campus, non-degree seeking students. In addition, all students wishing to enroll need the instructor's approval which will be based on a review of their preparation. Please e-mail Prof. George Francis at gfrancis@uiuc.edu to request approval. This course is not available to high school students. The prerequisites are Calculus III (vectors) and Math 347 or an equivalent course on mathematical discourse and proof. The course webpage for Math 402 can be viewed at: http://new.math.uiuc.edu/math402
Graduate - Urbana-Champaign OCE Tuition $380.00 per Bill Hour, Undergrad - Urbana-Champaign OCE Tuition $347.00 per Bill Hour, and OCE Fees $50.00 per Bill Hour.

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<td>MWF</td>
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</table>

Credit Hours: 3 hours
Quant Reasoning II course.
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Credit Hours: 4 hours
Quant Reasoning II course.
Instructor Approval Required
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