

Class Schedule - Fall 2009

Mathematics

002 **Introductory Algebra** credit: 3 hours.

Methods of elementary algebra, including simplification of algebraic expressions, solving linear and quadratic equations, equations of lines, systems of linear equations, and radicals. Enrollment is restricted. Credit may not be used toward graduation in the College of LAS. Prerequisite: Score on appropriate placement test, or consent of Mathematics Department.

This course is for students in the Transition Program only.

CRN	Type	Section	Time	Days	Location	Instructor
30322	lecture-discussion	M1	09:00 AM - 10:50 AM	TR	room 447 Altgeld Hall	Wahl, K
Restricted to students in the transition/bridge program.						
54888	lecture-discussion	R1	01:00 PM - 02:50 PM	TR	room 206 Transportation Bldg	Wahl, K
Restricted to students in the transition/bridge program.						

012 **Algebra** credit: 3 hours.

Rapid review of basic techniques of factoring, rational expressions, equations and inequalities; functions and graphs; exponential and logarithm functions; systems of equations; matrices and determinants; polynomials; and the binomial theorem. Students who need both algebra and trigonometry should enroll in MATH 016. Credit is not given for both MATH 012 and MATH 016. Credit not applicable toward graduation in certain curricula. Prerequisite: 1.5 units of high school algebra; 1 unit of high school geometry.

Students must register for one discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
32267	lecture-discussion	D2	11:00 AM - 12:20 PM	MTWR	room 447 Altgeld Hall	Wahl, K
Restricted to students in the transition/bridge program.						
32266	lecture-discussion	M1	09:30 AM - 10:50 AM	T	room 100 Materials Science and Eng Bld	Ahlgren, A
This section has combined evening exams. See http://www.math.uiuc.edu/timetable/ for the schedule. This section has a blended format in which half of the content is delivered in lecture and half is delivered on-line.						

014 **Trigonometry** credit: 2 hours.

Studies degrees and radians, the trigonometric functions, identities and equations, inverse functions, oblique triangles and applications. Credit is not given for both MATH 014 and either MATH 016 or MATH 115. Prerequisite: 1.5 units of high school algebra; 1 unit of high school geometry.

CRN	Type	Section	Time	Days	Location	Instructor
52331	lecture-discussion	F1	02:00 PM - 03:50 PM	TR	room 1310 Digital Computer Laboratory	Smith, K
Departmental Approval Required Meets 19-Oct-09 - 09-Dec-09.						

103 **Theory of Arithmetic** credit: 4 hours.

Analyses of the mathematical issues and methodology underlying elementary mathematics in grades K-5. Topics include sets, arithmetic algorithms, elementary number theory, rational and irrational numbers, measurement, and probability. There is an emphasis on problem solving. Priority registration will be given to students enrolled in teacher education programs leading to certification in elementary or childhood education. Prerequisite: MATH 012 or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
32048	laboratory	AB1	11:00 AM - 12:40 PM	F	room 14 Illini Hall	
32051	laboratory	AB2	03:00 PM - 04:40 PM	R	room 14 Illini Hall	Yancey, M
32055	laboratory	AB3	01:00 PM - 02:40 PM	R	room 14 Illini Hall	Son, S
32065	laboratory	AB4	01:00 PM - 02:40 PM	F	room 14 Illini Hall	Yancey, M
32067	lecture	AL1	10:00 AM - 10:50 AM	TR	room 269 Everitt Elec and Comp Engr Lab	Purkayastha, S
Quant Reasoning I course. Restricted to Education. Restricted to Early Childhood Education or Elementary Education or Pre-Early Chld/Elem Ed/Spec Ed major(s).						

115 **Preparation for Calculus** credit: 3 hours.

Reviews trigonometric, rational, exponential, and logarithmic functions; provides a full treatment of limits, definition of derivative, and an introduction to finding area under a curve. Intended for students who need preparation for MATH 220, either because they lack the content background or because they are not prepared for the rigor of a university calculus course. Credit is not given for both MATH 115 and either MATH 014 or MATH 016. Students may not receive credit for MATH 115 if MATH 115 is taken after receiving credit for MATH 220 or MATH 221. Prerequisite: MATH 012 and an adequate ALEKS score.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

CRN	Type	Section	Time	Days	Location	Instructor
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49212	lecture-discussion	A1	08:00 AM - 08:50 AM	MWF	room 314 Altgeld Hall	Carty, T; McNeilly, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
49795	lecture-discussion	AM1	08:00 AM - 08:50 AM	MWF	room 314 Altgeld Hall	Carty, T; McNeilly, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
49797	lecture-discussion	AM2	08:00 AM - 08:50 AM	MWF	room 314 Altgeld Hall	Carty, T; McNeilly, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
49798	lecture-discussion	AM3	08:00 AM - 08:50 AM	MWF	room 314 Altgeld Hall	Carty, T; McNeilly, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
51961	lecture-discussion	AM4	08:00 AM - 08:50 AM	MWF	room 314 Altgeld Hall	Carty, T; McNeilly, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
50693	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 100 Gregory Hall	McNeilly, J; Mackay, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
49213	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 124 Burrill Hall	McNeilly, J
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						

117 **Elementary Mathematics** credit: 4 hours.

Analyses of the mathematical issues and methodology underlying elementary mathematics in grades 6-8. Topics include the Real number system and field axioms, sequences and series, functions and math modeling with technology, Euclidean and non-Euclidean geometry, probability and statistics. Priority registration will be given to students enrolled in teacher education programs leading to certification in elementary education. Prerequisite: MATH 012 or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one lab and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
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32279	laboratory	AB1	01:00 PM - 02:40 PM	W	room 14 Illini Hall	Purkayastha, S
32281	laboratory	AB2	11:00 AM - 12:40 PM	R	room 14 Illini Hall	Funk, K
32028	laboratory	AB3	03:00 PM - 04:40 PM	W	room 14 Illini Hall	Funk, K
32029	laboratory	AB4	11:00 AM - 12:40 PM	W	room 14 Illini Hall	Purkayastha, S
32030	lecture	AL1	02:00 PM - 02:50 PM	TR	room 103 Transportation Bldg	Purkayastha, S

Quant Reasoning I course. Restricted to Education. Restricted to Early Childhood Education or Elementary Education or Pre-Early Chld/Elem Ed/Spec Ed major(s).

119 ***Ideas in Geometry*** credit: 3 hours.

General education course in mathematics, for students who do not have mathematics as a central part of their studies. The goal is to convey the spirit of mathematical thinking through topics chosen mainly from plane geometry. Prerequisite: Two units of high school algebra; one unit of high school geometry; or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

CRN	Type	Section	Time	Days	Location	Instructor
47768	lecture-discussion	B1	09:00 AM - 09:50 AM	MWF	room 147 Altgeld Hall	Grundmeier, D

124 ***Finite Mathematics*** credit: 3 hours.

Introduction to finite mathematics for students in the social sciences; introduces the student to the basic ideas of logic, set theory, probability, vectors and matrices, and Markov chains. Problems are selected from social sciences and business. Prerequisite: MATH 012 or an adequate ALEKS score.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

CRN	Type	Section	Time	Days	Location	Instructor
32037	lecture-discussion	M1	09:30 AM - 10:50 AM	T	room 119 English Bldg	Miller, J
Quant Reasoning I course. This section has combined evening exams. See http://www.math.uiuc.edu/timetable/ for the schedule. Restricted to students in the College of ACES. This section has a blended format in which half of the content is delivered in lecture and half is delivered on-line.						
45900	lecture-discussion	M2	09:30 AM - 10:50 AM	R	room 341 Altgeld Hall	Miller, J

Quant Reasoning I course. This section has combined evening exams. See <http://www.math.uiuc.edu/timetable/> for the schedule. Restricted to students in the College of ACES. This section has a blended format in which half of the content is delivered in lecture and half is delivered on-line.

32038	lecture-discussion	Q1	12:30 PM - 01:50 PM	T	room 2 Illini Hall	Ahlgren, A
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Quant Reasoning I course. This section has combined evening exams. See <http://www.math.uiuc.edu/timetable/> for the schedule. Restricted to students in the College of ACES. This section has a blended format in which half of the content is delivered in lecture and half is delivered on-line.

32040	lecture-discussion	Q2	12:30 PM - 01:50 PM	R	room 2 Illini Hall	Ci, Y
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Quant Reasoning I course. This section has combined evening exams. See <http://www.math.uiuc.edu/timetable/> for the schedule. Restricted to students in the College of ACES. This section has a blended format in which half of the content is delivered in lecture and half is delivered on-line.

125 **Elementary Linear Algebra** credit: 3 hours.

Basic concepts and techniques of linear algebra; includes systems of linear equations, matrices, determinants, vectors in n-space, and eigenvectors, together with selected applications, such as Markov processes, linear programming, economic models, least squares, and population growth. Credit is not given for both MATH 125 and any of MATH 225, MATH 410, or MATH 415. Prerequisite: MATH 012 or an adequate ALEKS score.

CRN	Type	Section	Time	Days	Location	Instructor
32041	lecture-discussion	B1	09:00 AM - 09:50 AM	MWF	room 103 Mumford Hall	Smith, K
Restricted to students in the College of Business.						
32042	lecture-discussion	D1	11:00 AM - 11:50 AM	MWF	room 103 Mumford Hall	Smith, K
Restricted to students in the College of Business.						

161 **Statistics** credit: 3 hours.

Same as STAT 100. See STAT 100.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

CRN	Type	Section	Time	Days	Location	Instructor
52535	lecture-discussion	A1	08:00 AM - 08:50 AM	MWF	room 141 Wohlers Hall	Patterson, J
48304	lecture	B1	11:00 AM - 11:50 AM	MWF	room 319 Gregory Hall	Liu, Y
34972	lecture-discussion	C1	12:30 PM - 01:50 PM	TR	room 100 Gregory Hall	Fireman, E

35052	lecture-discussion	E1	01:00 PM - 01:50 PM	MWF	room 103 Talbot Laboratory	Gan, L
35631	lecture-discussion	M1	09:30 AM - 10:50 AM	TR	room 314 Altgeld Hall	Fireman, E
41821	lecture-discussion	N1	09:00 AM - 09:50 AM	MWF	room 100 Materials Science and Eng Bld	Monrad, D
35688	lecture-discussion	S1	02:00 PM - 03:20 PM	TR	room 100 Gregory Hall	Fireman, E
41378	lecture-discussion	TI	09:00 AM - 09:50 AM	MWF	room 253 Mechanical Engineering Bldg	Hirtz, N

181 **A Mathematical World** credit: 3 hours.

Introduction to selected areas of mathematical sciences through application to modeling and solution of problems involving networks, circuits, trees, linear programming, random samples, regression, probability, inference, voting systems, game theory, symmetry and tilings, geometric growth, comparison of algorithms, codes and data management. Prerequisite: Three years of high school mathematics, including two years of algebra and one year of geometry.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

CRN	Type	Section	Time	Days	Location	Instructor
49140	lecture-discussion	B1	09:00 AM - 09:50 AM	MWF	room 347 Altgeld Hall	Kinnersley, W
49142	lecture-discussion	C1	10:00 AM - 10:50 AM	MWF	room 148 Henry Administration Bldg	Weber, J
49141	lecture-discussion	D1	11:00 AM - 11:50 AM	MWF	room 243 Altgeld Hall	Muncaster, R
First Year Discovery Program Course. Registration restricted to freshmen. Students should enroll in only one Discovery Program course. Discovery, and Quant Reasoning I course.						
52104	lecture-discussion	E1	01:00 PM - 02:50 PM	MWF	room 140 Henry Administration Bldg	Yeh, S
Meets 19-Oct-09 - 09-Dec-09. Quant Reasoning I course.						
49144	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 143 Henry Administration Bldg	Chen, A
49145	lecture-discussion	G1	03:00 PM - 03:50 PM	MWF	room 145 Altgeld Hall	Kim, I

49146	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 140 Henry Administration Bldg	Muncaster, R; Rapti, Z
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198 **Freshman Seminar** credit: 3 hours.

Guides the student in the study of selected topics not considered in standard courses. Prerequisite: Enrollment in the mathematics honors program; consent of department.

CRN	Type	Section	Time	Days	Location	Instructor
51385	lecture-discussion	G1H	03:00 PM - 03:50 PM	MWF	room 102 Altgeld Hall	Francis, G
Camp Honors/Chanc Schol course. Special Topic: Hypergraphics, 3 hours. This section for Chancellor's Scholars only (not restricted by major or year); other students may only enroll with consent of instructor and the Campus Honors Program.						

199 **Undergraduate Open Seminar** credit: 1 to 5 hours.

Approved for both letter and S/U grading. May be repeated.

CRN	Type	Section	Time	Days	Location	Instructor
10551	independent study		ARRANGED			
Instructor Approval Required						
47745	lecture-discussion	CHP	09:00 AM - 09:50 AM	MWF	room 212 1205 W Oregon	Evans, E
3 hours Special Topic: Mathematics in Music and Art. For Chancellor's Scholars only; other may enroll with the consent of the instructor and the Campus Honors Program. Camp Honors/Chanc Schol course.						
50300	lecture-discussion	FTM	03:00 PM - 03:50 PM	W	room 347 Altgeld Hall	Reese, G; Sebestik, J
1 hours Preparing Future Teachers of Mathematics. See http://www.math.uiuc.edu/timetable/ for the full course description.						
54467	discussion-recitation	JMD	01:00 PM - 02:50 PM	T	room 14 Illini Hall	McNeilly, J; Wenger, P
1 hours Departmental Approval Required For Math 285 Merit Workshop students only. Students should register for either section B1 (CRN 51205) or section D1 (CRN 51207). For further information see http://www.math.uiuc.edu/timetable/						
50395	discussion-recitation	JMM	03:00 PM - 04:50 PM	M	room 173 Altgeld Hall	McNeilly, J; Rios, F
1 hours Departmental Approval Required For Math 115 Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						

50397	discussion-recitation	JMT	03:00 PM - 04:50 PM	T	room 14 Illini Hall	Rios, F
1 hours Departmental Approval Required For Math 115 Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						
51989	discussion-recitation	JMW	03:00 PM - 04:50 PM	W	room 173 Altgeld Hall	McNeilly, J; Solie, B
1 hours Departmental Approval Required For Math 115 Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						

210 **Theory of Interest** credit: 3 hours.

Study of compound interest and annuities; applications to problems in finance. Prerequisite: MATH 231 or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30330	lecture-discussion	M1	09:30 AM - 10:50 AM	TR	room 223 Gregory Hall	Sneed, J
Quant Reasoning II course.						

213 **Basic Discrete Mathematics** credit: 3 hours.

Beginning course on discrete mathematics, including sets and relations, functions, basic counting techniques, recurrence relations, graphs and trees, and matrix algebra; emphasis throughout is on algorithms and their efficacy. Credit is not given for both MATH 213 and CS 173. Prerequisite: MATH 220 or MATH 221, or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32072	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 147 Altgeld Hall	Oikhberg, T
Quant Reasoning II course.						
32073	lecture-discussion	G1	03:00 PM - 03:50 PM	MWF	room 243 Altgeld Hall	Duursma, I
Quant Reasoning II course.						
32076	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 145 Altgeld Hall	Ash, C
Quant Reasoning II course.						

220 **Calculus** credit: 5 hours.

First course in calculus and analytic geometry; basic techniques of differentiation and integration with applications including curve sketching; antidifferentiation, the Riemann integral, fundamental theorem, exponential and trigonometric functions. Credit is not given for both MATH 220 and either MATH 221 or MATH 234. Prerequisite: MATH 016 or MATH 115; and an adequate ALEKS placement score.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one discussion and one lecture section beginning with the same letter. Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
33522	discussion-recitation	AD1	11:00 AM - 11:50 AM	TR	room 445 Altgeld Hall	Searles, D
50563	discussion-recitation	AD2	02:00 PM - 02:50 PM	TR	room 1 Illini Hall	Hu, P
34468	discussion-recitation	AD3	01:00 PM - 01:50 PM	TR	room 148 Henry Administration Bldg	Hu, Y
50564	discussion-recitation	AD4	08:00 AM - 08:50 AM	TR	room 347 Altgeld Hall	Hu, P
40135	discussion-recitation	AD5	12:00 PM - 12:50 PM	TR	room 149 Henry Administration Bldg	Benson, B
40141	discussion-recitation	AD6	09:00 AM - 09:50 AM	TR	room 441 Altgeld Hall	Hu, Y
34494	lecture	AL1	12:00 PM - 12:50 PM	MWF	room 141 Wohlers Hall	Murphy, R
Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/.Quant Reasoning I course .						
34508	laboratory-discussion	B8	09:00 AM - 09:50 AM	MTWRF	room 24 Illini Hall	Lenz, J
Oriented to applications in the Biological Sciences. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/.Quant Reasoning I course .						
34513	discussion-recitation	BD2	09:00 AM - 09:50 AM	TR	room 143 Altgeld Hall	Hickok, L
34517	discussion-recitation	BD3	10:00 AM - 10:50 AM	TR	room 142 Henry Administration Bldg	Hickok, L
49772	discussion-recitation	BD4	10:00 AM - 10:50 AM	TR	room 142 Henry Administration Bldg	Hickok, L

34531	discussion-recitation	BD5	11:00 AM - 11:50 AM	TR	room 141 Altgeld Hall	Schultz, D
49773	discussion-recitation	BD6	11:00 AM - 11:50 AM	TR	room 141 Altgeld Hall	Schultz, D
35101	discussion-recitation	BD7	01:00 PM - 02:50 PM	MWF	room 159 Altgeld Hall	Sinick, J
Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/Quant Reasoning I course .						
34521	discussion-recitation	BD8	12:00 PM - 12:50 PM	TR	room 445 Altgeld Hall	Schultz, D
35091	discussion-recitation	BD9	01:00 PM - 01:50 PM	TR	room 341 Altgeld Hall	Yang, R
35108	lecture	BL1	10:00 AM - 10:50 AM	MWF	room 314 Altgeld Hall	Murphy, R
Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/Quant Reasoning I course .						
35183	discussion-recitation	DD1	11:00 AM - 11:50 AM	TR	room 145 Altgeld Hall	Sun, W
35186	discussion-recitation	DD2	10:00 AM - 10:50 AM	TR	room 140 Henry Administration Bldg	Chen, Y
33451	discussion-recitation	DD4	12:00 PM - 12:50 PM	TR	room 143 Altgeld Hall	McDonald, D
33446	discussion-recitation	DD5	01:00 PM - 01:50 PM	TR	room 143 Altgeld Hall	McDonald, D
33443	discussion-recitation	DD6	01:00 PM - 02:50 PM	MWF	room 173 Altgeld Hall	Rochford, A
Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/Quant Reasoning I course .						
33440	discussion-recitation	DD7	12:00 PM - 12:50 PM	TR	room 148 Henry Administration Bldg	Sun, W
33434	discussion-recitation	DD8	09:00 AM - 10:50 AM	MWF	room 173 Altgeld Hall	Bonnell, C
Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/Quant Reasoning I course .						
41992	discussion-recitation	DD9	09:00 AM - 09:50 AM	TR	room 345 Altgeld Hall	Chen, Y

33431	lecture	DL1	11:00 AM - 11:50 AM	MWF	room 314 Altgeld Hall	Murphy, R
Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ . Quant Reasoning I course.						
33481	laboratory-discussion	E8	01:00 PM - 01:50 PM	MTWRF	room 239 Altgeld Hall	Appuhn, C
Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ . Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details. Quant Reasoning I course.						
34404	laboratory	GB1	03:00 PM - 04:50 PM	W	room 159 Altgeld Hall	Zaharescu, A
Small group learning lab. Must also sign up for Math 220 GE1 CRN 33484. Quant Reasoning I course.						
33484	lecture-discussion	GE1	02:00 PM - 02:50 PM	MTWRF	room 143 Altgeld Hall	Zaharescu, A
Uses small group learning methods. See http://www.math.uiuc.edu/timetable/ for details. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ . Must also register for Math 220 GB1, CRN 34404. First Year Discovery Program Course. Registration restricted to freshmen. Students should enroll in only one Discovery Program course. Discovery, and Quant Reasoning I course.						
39007	lecture	L1	10:00 AM - 10:50 AM	MWF	room 314 Altgeld Hall	Murphy, R
Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/ Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ . Quant Reasoning I course.						
39008	lecture	L2	10:00 AM - 10:50 AM	MWF	room 314 Altgeld Hall	Murphy, R
Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/ Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ . Quant Reasoning I course.						
39009	lecture	L3	10:00 AM - 10:50 AM	MWF	room 314 Altgeld Hall	Murphy, R
Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/ Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ . Quant Reasoning I course.						
46796	lecture	L4	10:00 AM - 10:50 AM	MWF	room 314 Altgeld Hall	Murphy, R
Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/ Placement in this course requires a U of I Math						

Placement Exam score of at least 70%. For details see <http://www.math.uiuc.edu/ALEKS/.Quant Reasoning I course>.

34440	lecture-discussion	U1	09:00 AM - 09:50 AM	MTWRF	room 40 Allen Residence Hall	Hill, A
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Restricted to Unit One. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see <http://www.math.uiuc.edu/ALEKS/.Quant Reasoning I course>.

221 **Calculus I** credit: 4 hours.

First course in calculus and analytic geometry for students with some calculus background; basic techniques of differentiation and integration with applications including curve sketching; antidifferentiation, the Riemann integral, fundamental theorem, exponential and trigonometric functions. Credit is not given for both MATH 221 and either MATH 220 or MATH 234. Prerequisite: An adequate ALEKS placement score; and either one year of high school calculus or a minimum score of 2 on the AB Calculus AP exam.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one discussion and one lecture section beginning with the same letter. Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
46994	discussion-recitation	AD1	08:00 AM - 08:50 AM	TR	room 143 Altgeld Hall	Pazdan-Siudeja, L
46995	discussion-recitation	AD2	09:00 AM - 10:50 AM	TR	room 173 Altgeld Hall	Fricano, A

Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see <http://www.math.uiuc.edu/timetable/>

46996	discussion-recitation	AD3	01:00 PM - 01:50 PM	TR	room 443 Altgeld Hall	DiPasquale, M
46997	discussion-recitation	AD4	03:00 PM - 03:50 PM	TR	room 147 Altgeld Hall	DiPasquale, M
46998	discussion-recitation	AD5	10:00 AM - 10:50 AM	TR	room 445 Altgeld Hall	Sheshmani, A
46999	discussion-recitation	AD6	01:00 PM - 02:50 PM	TR	room 173 Altgeld Hall	Vlasic, A

Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see <http://www.math.uiuc.edu/timetable/>

47000	discussion-recitation	AD7	12:00 PM - 12:50 PM	TR	room 341 Altgeld Hall	Puleo, G
47001	discussion-recitation	AD8	02:00 PM - 02:50 PM	TR	room 141 Altgeld Hall	Puleo, G
46992	lecture	AL1	09:00 AM - 09:50 AM	MW	room 114 David Kinley Hall	Whittlesey, K

Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see <http://www.math.uiuc.edu/ALEKS/>.

47003	discussion-recitation	BD1	08:00 AM - 08:50 AM	TR	room 441 Altgeld Hall	Peterson, E
47004	discussion-recitation	BD2	09:00 AM - 09:50 AM	TR	room 142 Henry Administration Bldg	Peterson, E
47005	discussion-recitation	BD3	10:00 AM - 10:50 AM	TR	room 148 Henry Administration Bldg	Huh, J
47008	discussion-recitation	BD5	11:00 AM - 11:50 AM	TR	room 142 Henry Administration Bldg	Huh, J
47009	discussion-recitation	BD6	01:00 PM - 01:50 PM	TR	room 447 Altgeld Hall	Magnuson, C
47012	discussion-recitation	BD7	02:00 PM - 02:50 PM	TR	room 142 Henry Administration Bldg	McLaughlin, I
47011	discussion-recitation	BD8	03:00 PM - 03:50 PM	TR	room 343 Altgeld Hall	McLaughlin, I
47002	lecture	BL1	08:00 AM - 08:50 AM	MW	room 114 David Kinley Hall	Leininger, C

Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see <http://www.math.uiuc.edu/ALEKS/>.

47014	discussion-recitation	CD1	03:00 PM - 03:50 PM	TR	room 168 Everitt Elec and Comp Engr Lab	Mekala, S
47015	discussion-recitation	CD2	04:00 PM - 04:50 PM	TR	room 343 Altgeld Hall	Mekala, S
47013	lecture	CL1	10:00 AM - 10:50 AM	MWF	room 140 Burrill Hall	Ahlgren, S

Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of > at least 70%. For details see <http://www.math.uiuc.edu/ALEKS/>. Restricted to Engineering. Restricted to students with Freshman class standing.

47025	discussion-recitation	DD2	09:00 AM - 10:50 AM	TR	room 159 Altgeld Hall	Phaovibul, M
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Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see <http://www.math.uiuc.edu/timetable/>

47026	discussion-recitation	DD3	03:00 PM - 03:50 PM	TR	room 140 Henry Administration Bldg	Zhu, Y
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47028	discussion-recitation	DD5	12:00 PM - 12:50 PM	TR	room 141 Altgeld Hall	Wittrig, A
47029	discussion-recitation	DD6	02:00 PM - 02:50 PM	TR	room 443 Altgeld Hall	Wittrig, A
47030	discussion-recitation	DD7	10:00 AM - 10:50 AM	TR	room 145 Altgeld Hall	Moslemi Naeini, M
47031	discussion-recitation	DD8	12:00 PM - 12:50 PM	TR	room 441 Altgeld Hall	Moslemi Naeini, M
Quant Reasoning I course. Restricted to students with Freshman class standing.						
51990	discussion-recitation	DD9	03:00 PM - 04:50 PM	TR	room 159 Altgeld Hall	Cooney, T
Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						
47023	lecture	DL1	01:00 PM - 01:50 PM	MW	room 314 Altgeld Hall	Whittlesey, K
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ .						
48291	discussion-recitation	ED2	10:00 AM - 10:50 AM	TR	room 345 Altgeld Hall	Zhao, Q
48292	discussion-recitation	ED3	11:00 AM - 11:50 AM	TR	room 343 Altgeld Hall	Li, Z
48293	discussion-recitation	ED4	12:00 PM - 12:50 PM	TR	room 219 Gregory Hall	Reiniger, B
48295	discussion-recitation	ED6	12:00 PM - 12:50 PM	TR	room 4101 Materials Science and Eng Bld	Li, Z
48296	discussion-recitation	ED7	02:00 PM - 02:50 PM	TR	room 445 Altgeld Hall	Zhao, Q
47027	discussion-recitation	ED9	01:00 PM - 01:50 PM	TR	room 145 Altgeld Hall	Reiniger, B
48289	lecture	EL1	12:00 PM - 12:50 PM	MW	room 100 Gregory Hall	Reznick, B
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 70%. For details see http://www.math.uiuc.edu/ALEKS/ .						

225 **Introductory Matrix Theory** credit: 2 hours.

Systems of linear equations, matrices and inverses, determinants, and a glimpse at vector spaces, eigenvalues and eigenvectors. Credit is not given for both MATH 225 and any of MATH 125, MATH 410, or MATH 415. Prerequisite: MATH 220 or MATH 221; or equivalent.

Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
34408	lecture-discussion	M1	09:00 AM - 09:50 AM	TR	room 141 Altgeld Hall	Szuta, P
34413	lecture-discussion	N1	10:00 AM - 10:50 AM	TR	room 218 Ceramics Bldg	Lee, J
34424	lecture-discussion	P1	11:00 AM - 11:50 AM	TR	room 106B8 Engineering Hall	Ivanov, S
34429	lecture-discussion	Q1	12:00 PM - 12:50 PM	TR	room 106B8 Engineering Hall	Bradlow, S
34433	lecture-discussion	R1	02:00 PM - 03:50 PM	TR	room 303 English Bldg	Song, S
Meets 19-Oct-09 - 09-Dec-09.						
34434	lecture-discussion	R2	01:00 PM - 01:50 PM	TR	room 142 Henry Administration Bldg	Kumbhat, M
34436	lecture-discussion	S1	02:00 PM - 02:50 PM	TR	room 245 Altgeld Hall	Block, A
34438	laboratory-discussion	T8	03:00 PM - 04:50 PM	TR	room 24 Illini Hall	Kirov, R
Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.Meets 19-Oct-09 - 09-Dec-09.						

231 **Calculus II** credit: 3 hours.

Second course in calculus and analytic geometry: techniques of integration, conic sections, polar coordinates, and infinite series. Credit is not given for both MATH 231 and MATH 230. Prerequisite: MATH 220 or MATH 221.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one discussion and one lecture section beginning with the same letter. Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
55157	lecture-discussion	A1	08:00 AM - 08:50 AM	MWF	room 141 Altgeld Hall	Armstrong, D; Park, H
46844	discussion-recitation	AD1	08:00 AM - 08:50 AM	TR	room 142 Henry Administration Bldg	Mak, K
46849	discussion-recitation	AD2	09:00 AM - 09:50 AM	TR	room 140 Henry Administration Bldg	Mak, K

46851	discussion-recitation	AD3	10:00 AM - 10:50 AM	TR	room 147 Altgeld Hall	Xu, P
46853	discussion-recitation	AD4	01:00 PM - 01:50 PM	TR	room 147 Altgeld Hall	Darayon, C
46856	discussion-recitation	AD5	02:00 PM - 02:50 PM	TR	room 148 Henry Administration Bldg	Xu, P
46858	discussion-recitation	AD6	11:00 AM - 11:50 AM	TR	room 341 Altgeld Hall	Darayon, C
49232	discussion-recitation	AD7	12:00 PM - 12:50 PM	TR	room 430 Armory	Stocker, C
46860	lecture	AL1	08:00 AM - 08:50 AM	MW	room 66 Library - Main	Kim, P
<p>Quant Reasoning I course. This section is closed to new Engineering and Physics freshmen. Open to all others. Non-freshman students in Engineering or Physics should contact the Math Undergraduate Office (advising@math.uiuc.edu) for a restriction override to enable registration. Not intended for Engineering.</p>						
50605	discussion-recitation	BD0	11:00 AM - 11:50 AM	TR	room 143 Henry Administration Bldg	Tiwari, A
46861	discussion-recitation	BD1	09:00 AM - 09:50 AM	TR	room 443 Altgeld Hall	Tiwari, A
46862	discussion-recitation	BD2	10:00 AM - 10:50 AM	TR	room 149 Henry Administration Bldg	Zimmer, A
46864	discussion-recitation	BD3	11:00 AM - 11:50 AM	TR	room 147 Altgeld Hall	Duda, A
46865	discussion-recitation	BD4	12:00 PM - 12:50 PM	TR	room 343 Altgeld Hall	Duda, A
46868	discussion-recitation	BD5	01:00 PM - 01:50 PM	TR	room 445 Altgeld Hall	Peuker, J
46877	discussion-recitation	BD6	03:00 PM - 03:50 PM	TR	room 443 Altgeld Hall	Zimmer, A
49233	discussion-recitation	BD7	01:00 PM - 01:50 PM	TR	room 441 Altgeld Hall	Rettberg, R
49990	discussion-recitation	BD8	03:00 PM - 03:50 PM	TR	room 445 Altgeld Hall	Rettberg, R
50606	discussion-recitation	BD9	12:00 PM - 12:50 PM	TR	room 140 Henry Administration Bldg	Peuker, J
46880	lecture	BL1	12:00 PM - 12:50 PM	MWF	room 100 Materials	Ando, M

					Science and Eng Bld	
Quant Reasoning I course. Restricted to new freshmen in the College of Engineering. Restricted to Engineering. Must enroll concurrently in MATH 299 50014.						
46881	discussion- recitation	CD1	08:00 AM - 08:50 AM	TR	room 243 Altgeld Hall	Kwack, J
46882	discussion- recitation	CD2	10:00 AM - 10:50 AM	TR	room 141 Altgeld Hall	Kwack, J
46883	discussion- recitation	CD3	11:00 AM - 11:50 AM	TR	room 441 Altgeld Hall	Jao, F
46888	discussion- recitation	CD5	01:00 PM - 01:50 PM	TR	room 143 Henry Administration Bldg	Jao, F
46889	discussion- recitation	CD6	02:00 PM - 02:50 PM	TR	room 341 Altgeld Hall	Bruno, V
46896	discussion- recitation	CD7	03:00 PM - 03:50 PM	TR	room 143 Altgeld Hall	Bruno, V
46897	lecture	CL1	01:00 PM - 01:50 PM	MWF	room 151 Loomis Laboratory	Laugesen, R
Quant Reasoning I course. Restricted to new freshmen in the College of Engineering. Must enroll concurrently in Math 299 C CRN 50015. Restricted to Engineering. Must enroll concurrently in MATH 299 50015.						
46899	discussion- recitation	DD2	11:00 AM - 11:50 AM	TR	room 140 Henry Administration Bldg	Spiegelhalter, P
46900	discussion- recitation	DD3	12:00 PM - 12:50 PM	TR	room 143 Henry Administration Bldg	Spiegelhalter, P
46901	discussion- recitation	DD4	01:00 PM - 01:50 PM	TR	room 304 Noyes Laboratory	Cho, W
46905	discussion- recitation	DD5	02:00 PM - 02:50 PM	TR	room 143 Henry Administration Bldg	Li, X
46906	discussion- recitation	DD6	03:00 PM - 03:50 PM	TR	room 149 Henry Administration Bldg	Bankovic, A
46907	discussion- recitation	DD7	02:00 PM - 02:50 PM	TR	room 447 Altgeld Hall	Bankovic, A
49238	discussion- recitation	DD8	11:00 AM - 12:50 PM	TR	room 159 Altgeld Hall	Ravat, U
Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						

46908	lecture	DL1	03:00 PM - 03:50 PM	MW	room 100 Materials Science and Eng Bld	Csima, N
Quant Reasoning I course. This section is closed to new Engineering and Physics freshmen. Open to all others. Non-freshman students in Engineering or Physics should contact the Math Undergraduate Office (advising@math.uiuc.edu) for a restriction override to enable registration. Not intended for Engineering.						
46910	laboratory	EB1	03:00 PM - 04:50 PM	M	room 159 Altgeld Hall	Dewar, M
Quant Reasoning I course. Small group learning lab. Must also sign up for Math 231 EE1 CRN 46911.						
46911	lecture- discussion	EE1	01:00 PM - 01:50 PM	MWF	room 241 Altgeld Hall	Dewar, M
Quant Reasoning I course. Uses small group learning methods. See http://www.math.uiuc.edu/timetable/ for details. Must also sign up for Math 231 EB1 CRN 46910.						
46909	lecture- discussion	F1H	02:00 PM - 02:50 PM	MWF	room 148 Henry Administration Bldg	Kapovitch, I
Quant Reasoning I course. Honors section. Grade of A in Math 220 (221) or score of 5 on AP Calculus AB exam required. Requires concurrent enrollment in Math 249 Q1H CRN 32044. See http://www.math.uiuc.edu/timetable/ for details. Departmental approval required. Not intended for Engineering. Not intended for Graduate - Urbana-Champaign.						
46898	discussion- recitation	LD1	09:00 AM - 09:50 AM	TR	room 149 Henry Administration Bldg	Cho, W
52032	discussion- recitation	LD2	09:00 AM - 09:50 AM	TR	room 149 Henry Administration Bldg	Cho, W
Quant Reasoning I course. Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/						
52033	lecture	LL1	03:00 PM - 03:50 PM	MW	room 100 Materials Science and Eng Bld	Csima, N
Quant Reasoning I course. Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/						
52034	lecture	LL2	03:00 PM - 03:50 PM	MW	room 100 Materials Science and Eng Bld	Csima, N
Quant Reasoning I course. Reserved for incoming LAS freshmen only. If you have questions about your qualifications for this program please go to http://www.las.uiuc.edu/learningcommunity/						

46916	lecture-discussion	W1	11:00 AM - 12:50 PM	MWF	room 173 Altgeld Hall	McNeilly, J; Eldred, R
Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						
46918	lecture-discussion	W2	09:00 AM - 10:50 AM	MWF	room 159 Altgeld Hall	McNeilly, J; Butterfield, J
Quant Reasoning I course. Departmental Approval Required For Merit Workshop students only. For further information see http://www.math.uiuc.edu/timetable/						
46919	laboratory-discussion	X8	12:00 PM - 12:50 PM	MWF	room 24 Illini Hall	Liu, C
Quant Reasoning I course. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						

234 **Calculus for Business I** credit: 4 hours.

Introduction to the concept of functions and the basic ideas of the calculus. Credit is not given for both MATH 234 and either MATH 220 or MATH 221. Prerequisite: MATH 012 and an adequate ALEKS score.

This course satisfies the General Education Criteria for a Quant Reasoning I course.

Students must register for one discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
34456	discussion-recitation	AD1	08:00 AM - 08:50 AM	TR	room 147 Altgeld Hall	Jaipong, P
34466	discussion-recitation	AD2	09:00 AM - 09:50 AM	TR	room 143 Henry Administration Bldg	Jaipong, P
34472	discussion-recitation	AD3	09:00 AM - 09:50 AM	TR	room 445 Altgeld Hall	Anders, K
34485	discussion-recitation	AD5	10:00 AM - 10:50 AM	TR	room 347 Altgeld Hall	Anders, K
34496	lecture	AL1	10:00 AM - 10:50 AM	MW	room 1320 Digital Computer Laboratory	Kelsey, G
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
34511	discussion-recitation	BD1	11:00 AM - 11:50 AM	MW	room 149 Henry Administration Bldg	Troup, J
34515	discussion-recitation	BD2	11:00 AM - 11:50 AM	MW	room 140 Henry Administration Bldg	Tran, K

34519	discussion-recitation	BD3	12:00 PM - 12:50 PM	MW	room 142 Henry Administration Bldg	Vellis, V
34524	discussion-recitation	BD4	12:00 PM - 12:50 PM	MW	room 149 Henry Administration Bldg	Hall, J
34541	discussion-recitation	BD5	09:00 AM - 09:50 AM	MW	room 141 Altgeld Hall	Vellis, V
35096	discussion-recitation	BD6	01:00 PM - 01:50 PM	MW	room 149 Henry Administration Bldg	Hall, J
35104	discussion-recitation	BD7	01:00 PM - 01:50 PM	MW	room 243 Altgeld Hall	Tran, K
48272	discussion-recitation	BD8	10:00 AM - 10:50 AM	MW	room 145 Altgeld Hall	Troup, J
35112	lecture	BL1	12:00 PM - 12:50 PM	TR	room 314 Altgeld Hall	Kim, Y
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						
35124	discussion-recitation	CD1	01:00 PM - 01:50 PM	TR	room 336 Mechanical Engineering Bldg	He, S
35137	discussion-recitation	CD2	02:00 PM - 02:50 PM	TR	room 140 Henry Administration Bldg	He, S
35157	discussion-recitation	CD4	03:00 PM - 03:50 PM	TR	room 141 Altgeld Hall	Tsai, M
45895	discussion-recitation	CD6	01:00 PM - 01:50 PM	TR	room 141 Altgeld Hall	Hunte, A
48273	discussion-recitation	CD8	04:00 PM - 04:50 PM	TR	room 140 Henry Administration Bldg	Tsai, M
35173	lecture	CL1	03:00 PM - 03:50 PM	MW	room 112 Gregory Hall	Tichenor, S
Quant Reasoning I course. Placement in this course requires a U of I Math Placement Exam score of at least 50%. For details see http://www.math.uiuc.edu/ALEKS/ .						

241 **Calculus III** credit: 4 hours.

Third course in calculus and analytic geometry including vector analysis: Euclidean space, partial differentiation, multiple integrals, line integrals and surface integrals, the integral theorems of vector calculus. Credit is not given for both MATH 241 and any of MATH 244, MATH 292, or MATH 380. Prerequisite: MATH 231.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

Students must register for one discussion and one lecture section beginning with the same letter. Engineering students must obtain a dean's approval to drop this course after the second week of instruction.

CRN	Type	Section	Time	Days	Location	Instructor
47037	discussion-recitation	AD1	08:00 AM - 08:50 AM	TR	room 145 Altgeld Hall	Polanco Encarnacion, G
Quant Reasoning II course.						
47038	discussion-recitation	AD2	09:00 AM - 09:50 AM	TR	room 148 Henry Administration Bldg	Kim, K
Quant Reasoning II course.						
47039	discussion-recitation	AD3	09:00 AM - 09:50 AM	TR	room 260 Mechanical Engineering Bldg	Zeng, Q
Quant Reasoning II course.						
47040	discussion-recitation	AD4	12:00 PM - 12:50 PM	TR	room 147 Altgeld Hall	Polanco Encarnacion, G
Quant Reasoning II course.						
47041	discussion-recitation	AD5	01:00 PM - 01:50 PM	TR	room 149 Henry Administration Bldg	Zeng, Q
Quant Reasoning II course.						
47042	discussion-recitation	AD6	01:00 PM - 02:50 PM	TR	room 159 Altgeld Hall	Lesaulnier, T
Quant Reasoning II course. Departmental Approval Required For Merit Workshop students only. Departmental approval required. For further information see http://www.math.uiuc.edu/timetable/						
50384	discussion-recitation	AD7	11:00 AM - 12:50 PM	TR	room 173 Altgeld Hall	Im, M
Quant Reasoning II course. Departmental Approval Required For Merit Workshop students only. Departmental approval required. For further information see http://www.math.uiuc.edu/timetable/						
52589	discussion-recitation	AD8	12:00 PM - 12:50 PM	TR	room 260 Mechanical Engineering Bldg	Kim, S
Quant Reasoning II course.						
52590	discussion-recitation	AD9	10:00 AM - 10:50 AM	TR	room 343 Altgeld Hall	Kim, S
Quant Reasoning II course.						

47036	lecture	AL1	09:00 AM - 09:50 AM	MWF	room 314 Altgeld Hall	Carty, T
Quant Reasoning II course.						
51357	laboratory-discussion	B8	09:00 AM - 09:50 AM	MTWR	room 239 Altgeld Hall	Avsec, S
Quant Reasoning II course. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						
47044	discussion-recitation	BD1	08:00 AM - 08:50 AM	TR	room 148 Henry Administration Bldg	Lukyanenko, A
Quant Reasoning II course.						
47045	discussion-recitation	BD2	09:00 AM - 09:50 AM	TR	room 145 Altgeld Hall	Lukyanenko, A
Quant Reasoning II course.						
47046	discussion-recitation	BD3	01:00 PM - 01:50 PM	TR	room 252 Mechanical Engineering Bldg	Fu, S
Quant Reasoning II course.						
47048	discussion-recitation	BD4	02:00 PM - 02:50 PM	TR	room 147 Altgeld Hall	Choi, J
Quant Reasoning II course.						
47050	discussion-recitation	BD6	03:00 PM - 03:50 PM	TR	room 142 Henry Administration Bldg	Fu, S
Quant Reasoning II course.						
47043	lecture	BL1	02:00 PM - 02:50 PM	MWF	room 314 Altgeld Hall	Carty, T
Quant Reasoning II course.						
47052	discussion-recitation	CD1	08:00 AM - 08:50 AM	TR	room 140 Henry Administration Bldg	Beder, J
Quant Reasoning II course.						
47055	discussion-recitation	CD2	09:00 AM - 09:50 AM	TR	room 147 Altgeld Hall	Reuter, V
Quant Reasoning II course.						
47056	discussion-recitation	CD3	11:00 AM - 11:50 AM	TR	room 149 Henry Administration Bldg	Slutskyy, K

Quant Reasoning II course.						
47057	discussion-recitation	CD4	02:00 PM - 02:50 PM	TR	room 149 Henry Administration Bldg	Slutsky, K
Quant Reasoning II course.						
47672	discussion-recitation	CD5	12:00 PM - 12:50 PM	TR	room 40 Allen Residence Hall	Beder, J
Quant Reasoning II course. For Unit One and other Living-Learning Communities						
51991	discussion-recitation	CD6	03:00 PM - 04:50 PM	TR	room 173 Altgeld Hall	Thiel, J
Quant Reasoning II course. Departmental Approval Required For Merit Workshop students only. Departmental approval required. For further information see http://www.math.uiuc.edu/timetable/						
47058	lecture	CL1	12:00 PM - 12:50 PM	MWF	room 134 Temple Hoyne Buell Hall	Tumanov, A
Quant Reasoning II course.						
47636	lecture-discussion	D8	11:00 AM - 11:50 AM	MTWR	room 24 Illini Hall	Vandehey, J
Quant Reasoning II course. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						
50549	discussion-recitation	DD1	04:00 PM - 04:50 PM	TR	room 241 Altgeld Hall	Seo, J
Quant Reasoning II course.						
49245	discussion-recitation	DD2	10:00 AM - 10:50 AM	TR	room 143 Henry Administration Bldg	Sirikci, N
Quant Reasoning II course.						
49246	discussion-recitation	DD3	11:00 AM - 11:50 AM	TR	room 143 Altgeld Hall	Sirikci, N
Quant Reasoning II course.						
49247	discussion-recitation	DD4	12:00 PM - 12:50 PM	TR	room 142 Henry Administration Bldg	Ray, B
Quant Reasoning II course.						
49248	discussion-recitation	DD5	01:00 PM - 01:50 PM	TR	room 140 Henry Administration Bldg	Ray, B
Quant Reasoning II course.						

49249	discussion- recitation	DD6	03:00 PM - 03:50 PM	TR	room 148 Henry Administration Bldg	To, J
Quant Reasoning II course.						
49250	discussion- recitation	DD7	04:00 PM - 04:50 PM	TR	room 145 Altgeld Hall	To, J
Quant Reasoning II course.						
49251	lecture	DL1	04:00 PM - 04:50 PM	MWF	room 314 Altgeld Hall	Li, L
Quant Reasoning II course.						
46943	lecture- discussion	E1H	01:00 PM - 01:50 PM	MTWR	room 343 Altgeld Hall	McCarthy, R
Quant Reasoning II course. Honors section. Grades of A in Math 220 (221) and Math 231 or score of 5 on AP calculus BC exam required. Departmental approval required. See http://www.math.uiuc.edu/timetable/ for details. Not intended for Graduate - Urbana-Champaign.						
51398	discussion- recitation	ED1	08:00 AM - 08:50 AM	TR	room 343 Altgeld Hall	Kim, E
Quant Reasoning II course.						
51400	discussion- recitation	ED3	09:00 AM - 09:50 AM	TR	room 343 Altgeld Hall	Kim, E
Quant Reasoning II course.						
51401	discussion- recitation	ED4	09:00 AM - 09:50 AM	TR	room 347 Altgeld Hall	Yuttanan, B
Quant Reasoning II course.						
51402	discussion- recitation	ED5	10:00 AM - 10:50 AM	TR	room 441 Altgeld Hall	Yuttanan, B
Quant Reasoning II course.						
51403	discussion- recitation	ED6	10:00 AM - 10:50 AM	TR	room 443 Altgeld Hall	Zheng, Z
Quant Reasoning II course.						
51397	lecture	EL1	08:00 AM - 08:50 AM	MWF	room 180 Bevier Hall	Nikolaev, I
Quant Reasoning II course.						
50501	discussion- recitation	FD1	08:00 AM - 08:50 AM	TR	room 141 Altgeld Hall	Lior, D
Quant Reasoning II course.						

47049	discussion- recitation	FD2	02:00 PM - 02:50 PM	TR	room 441 Altgeld Hall	Lior, D
Quant Reasoning II course.						
54599	lecture	FLH	02:00 PM - 02:50 PM	MWF	room 165 Everitt Elec and Comp Engr Lab	Lerman, E
Quant Reasoning II course. Honors section.						
48133	lecture- discussion	G1H	03:00 PM - 03:50 PM	MTWR	room 143 Henry Administration Bldg	Rouse, J
Quant Reasoning II course. Honors section. Grades of A in Math 220 (221) and Math 231 or score of 5 on AP calculus BC exam required. Departmental approval required. See http://www.math.uiuc.edu/timetable/ for details. Not intended for Graduate - Urbana-Champaign.						
49256	lecture- discussion	X8	12:00 PM - 12:50 PM	W	room 165 Noyes Laboratory	Dixit, A
Quant Reasoning II course.						
	lecture- discussion	X8	12:00 PM - 12:50 PM	MTR	room 239 Altgeld Hall	Dixit, A
Quant Reasoning II course. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						

249 **Honors Supplement** credit: 1 hours.

Supplemental credit hour for honors courses with additional material or special projects. Prerequisite: Concurrent registration in a specially designated honors section and consent of department.

CRN	Type	Section	Time	Days	Location	Instructor
32044	lecture- discussion	Q1H	ARRANGED			Kapovitch, I
Departmental Approval Required Not intended for Graduate - Urbana-Champaign. Requires concurrent registration in MATH 231 E1H CRN 46909 .						

285 **Intro Differential Equations** credit: 3 hours.

Techniques and applications of ordinary differential equations, including Fourier series and boundary value problems, and an introduction to partial differential equations. Intended for engineering majors and others who require a working knowledge of differential equations. Credit is not given for both MATH 285 and any of MATH 284, MATH 286, MATH 441. Prerequisite: MATH 241.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
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51205	lecture-discussion	B1	09:00 AM - 09:50 AM	MWF	room 245 Altgeld Hall	Palmore, J
Quant Reasoning II course.						
51206	lecture-discussion	C1	10:00 AM - 10:50 AM	MWF	room 245 Altgeld Hall	Stolarsky, K
Quant Reasoning II course.						
51207	lecture-discussion	D1	11:00 AM - 11:50 AM	MWF	room 156 Henry Administration Bldg	Palmore, J
Quant Reasoning II course.						
51208	lecture-discussion	E1	01:00 PM - 01:50 PM	MWF	room 156 Henry Administration Bldg	Bronski, J
Quant Reasoning II course.						
51210	laboratory-discussion	E8	01:00 PM - 01:50 PM	MWF	room 24 Illini Hall	Kutzarova-Ford, D
Quant Reasoning II course. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						
51209	laboratory-discussion	F8	02:00 PM - 02:50 PM	MWF	room 24 Illini Hall	Kutzarova-Ford, D
Quant Reasoning II course. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						
51352	lecture-discussion	N1	11:00 AM - 12:20 PM	TR	room 156 Henry Administration Bldg	Kirr, E
Quant Reasoning II course.						
51353	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 245 Altgeld Hall	Bronski, J
Quant Reasoning II course.						

286 **Intro to Differential Eq Plus** credit: 4 hours.

Techniques and applications of ordinary differential equations, including Fourier series and boundary value problems, linear systems of differential equations, and an introduction to partial differential equations. Covers all the MATH 285 plus linear systems. Intended for engineering majors and other who require a working knowledge of differential equations. Credit is not given for both MATH 286 and any of MATH 284, MATH 285, MATH 441. Prerequisite: MATH 241.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
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51203	lecture-discussion	G1	03:00 PM - 03:50 PM	MTWR	room 161 Noyes Laboratory	Mei, T
Quant Reasoning II course.Restricted to Computer Engineering or Electrical Engineering major(s). Registration is restricted to students majoring in Electrical and Computer Engineering.						
51355	lecture-discussion	G8	03:00 PM - 03:50 PM	TR	room 245 Altgeld Hall	Carpenter, B
Quant Reasoning II course.Restricted to Computer Engineering or Electrical Engineering major(s).						
	lecture-discussion	G8	03:00 PM - 03:50 PM	MW	room 239 Altgeld Hall	Carpenter, B
Quant Reasoning II course.Restricted to Computer Engineering or Electrical Engineering major(s). Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details. Registration is restricted to students majoring in Electrical and Computer Engineering.						
51204	lecture-discussion	X1	12:00 PM - 12:50 PM	MTWR	room 140 Burrill Hall	DeVille, R
Quant Reasoning II course.Restricted to Computer Engineering or Electrical Engineering major(s). Registration is restricted to students majoring in Electrical and Computer Engineering.						

290 **Symbolic Computation Lab** credit: 1 hours.

Laboratory component to courses using a symbolic programming package. Prerequisite: Consent of department; concurrent registration in a designated section of a mathematics course with symbolic computation component. May be taken only once for credit.

CRN	Type	Section	Time	Days	Location	Instructor
34423	lecture-discussion	P	ARRANGED			Appuhn, C; Lenz, J
Departmental Approval Required Students from MATH 220 Mathematica sections may enroll in this section.						
34427	lecture-discussion	Q	ARRANGED			Liu, C
Departmental Approval Required Students from MATH 231 Mathematica sections may enroll in this section.						
46233	lecture-discussion	R	ARRANGED			Avsec, S; Dixit, A
Departmental Approval Required Students from MATH 241 Mathematica sections may enroll in this section.						
34435	lecture-discussion	S	ARRANGED			Carpenter, B
Departmental Approval Required Students from Math 286 Mathematica sections may enroll in this section.						
52109	lecture-discussion	T	ARRANGED			Dennison, M
Departmental Approval Required Students from Math 292 Mathematica sections may enroll in this section.						

34439	lecture-discussion	U	ARRANGED			Kutzarova-Ford, D
Departmental Approval Required Students from MATH 285 Mathematica sections may enroll in this section.						
34442	lecture-discussion	V	ARRANGED			Kirov, R
Departmental Approval Required Students from MATH 225 Mathematica sections may enroll in this section.						
34443	lecture-discussion	W	ARRANGED			Schultz, A
Departmental Approval Required Students from Math 415 Mathematica sections may enroll in this section.						
52588	lecture-discussion	X	ARRANGED			
Departmental Approval Required Students from MATH 299 section XM may enroll in this section.						
34453	lecture-discussion	Y	ARRANGED			Reznick, B
Departmental Approval Required Students from MATH 461 Mathematica sections may enroll in this section.						

292 **Vector Calculus Supplement** credit: 2 hours.

Course in multivariable calculus. Topics include gradient, divergence, and curl; line and surface integrals; and the theorems of Green, Stokes, and Gauss. Intended for transfer students whose multivariable calculus course did not include the integral theorems of vector calculus. Credit is not given for both MATH 292 and MATH 241. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
51982	laboratory-discussion	Z8	ARRANGED			Dennison, M
Departmental Approval Required Section Z8 will be taught asynchronously. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for further details.						

299 **Topics in Mathematics** credit: 1 to 4 hours.

Topics course; see Class Schedule or department office for current topics. May be repeated in the same or subsequent semesters to a maximum of 8 hours. Prerequisite: MATH 220 or MATH 221; consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
50014	lecture-discussion	B	ARRANGED			Ando, M
1 hours Must enroll concurrently in MATH 231 46880.						
50015	lecture-discussion	C	ARRANGED			Laugesen, R

1 hours Must enroll concurrently in MATH 231 46897.						
54986	online	XM	ARRANGED			Dennison, M
3 hours Calculus Refresher Academic Outreach restrictions and assessments apply, see http://www.outreach.uiuc.edu . Enrollment in his section is restricted to undergraduate nondegree students only. Restricted to NDEG: Undergrad Nondeg-CE-UIUC. Online Meets 19-Oct-09 - 09-Dec-09. AO Tuition 277, and AO Fees 45.00 dollars.						
55364	lecture-discussion	Z	ARRANGED			Dennison, M
3 hours Departmental Approval Required Restricted to students dropping Math 241 in Fall 2009. Contact advising@math.uiuc.edu to seek permission to register. Meets 19-Oct-09 - 09-Dec-09.						

347 Fundamental Mathematics credit: 3 hours.

Fundamental ideas used in many areas of mathematics. Topics will include: techniques of proof, mathematical induction, binomial coefficients, rational and irrational numbers, the least upper bound axiom for real numbers, and a rigorous treatment of convergence of sequences and series. This will be supplemented by the instructor from topics available in the various texts. Students will regularly write proofs emphasizing precise reasoning and clear exposition. Credit is not given for both MATH 347 and MATH 348. Prerequisite: MATH 231.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
34498	lecture-discussion	B1	09:00 AM - 09:50 AM	MWF	room 241 Altgeld Hall	Kim, P
34504	lecture-discussion	D1H	11:00 AM - 11:50 AM	MWF	room 141 Altgeld Hall	Solecki, S
Departmental Approval Required Honors section. Permission of Honors Committee required. E-mail advising@math.uiuc.edu for further information. James Scholars, and Quant Reasoning II course.						
34383	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 149 Henry Administration Bldg	Wu, J
34395	lecture-discussion	G1	03:00 PM - 03:50 PM	MWF	room 147 Altgeld Hall	Milin, I
34444	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 141 Altgeld Hall	Oikhberg, T
34448	lecture-discussion	X2	12:00 PM - 12:50 PM	MWF	room 241 Altgeld Hall	Csima, N

348 Fundamental Mathematics-ACP credit: 4 hours.

Course is identical to MATH 347 except for the additional writing component. Credit is not given for both MATH 348 and MATH 347. Prerequisite: MATH 231 and completion of the campus Composition I general education requirement.

This course satisfies the General Education Criteria for a Advanced Composition, and Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30337	lecture-discussion	C1	10:00 AM - 10:50 AM	MTWF	room 143 Altgeld Hall	Mortensen, K
Advanced Composition, and Quant Reasoning II course.						

357 **Numerical Methods I** credit: 3 hours.
Same as CS 357. See CS 357.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
53281	lecture-discussion	M	09:30 AM - 10:45 AM	TR	room 1404 Siebel Center for Comp Sci	Olson, L
Quant Reasoning II course. 3 hours						

362 **Probability with Engrg Applic** credit: 3 hours.
Same as ECE 313. See ECE 313.

CRN	Type	Section	Time	Days	Location	Instructor
54661	discussion-recitation	C	10:00 AM - 10:50 AM	MWF	room 163 Everitt Elec and Comp Engr Lab	Sarwate, D
Not intended for Graduate - Urbana-Champaign. 3 hours						
54663	discussion-recitation	D	11:00 AM - 11:50 AM	MWF	room 163 Everitt Elec and Comp Engr Lab	Kamalabadi, F
Not intended for Graduate - Urbana-Champaign. 3 hours						
54664	discussion-recitation	E	01:00 PM - 01:50 PM	MWF	room 101 Transportation Bldg	Viswanath, P
Not intended for Graduate - Urbana-Champaign. 3 hours						

370 **Actuarial Problem Solving** credit: 1 hours.

Methods and techniques of solving problems in actuarial mathematics for advanced students intending to enter the actuarial profession. Approved for S/U grading only. May be repeated in the same or subsequent semesters to a maximum of 4 hours. Prerequisite: Consent of instructor.

Students planning to sit for the "Course 1" Actuarial exam should register for section X. This will carry a 1 hour credit only.

CRN	Type	Section	Time	Days	Location	Instructor
32086	conference	X	07:00 PM - 08:50 PM	M	room 245 Altgeld Hall	Dai, L
1 hours For students who will take Course 1 of the National Actuarial Exam. 1 hour credit only.						
32094	conference	Y	ARRANGED			
Instructor Approval Required						
32097	conference	Z	07:00 PM - 08:50 PM	T	room 245 Altgeld Hall	Dai, L
For students who will take Course 2 of the National Actuarial Exam.						

390 **Individual Study** credit: 0 to 3 hours.

Guided individual study of advanced topics not covered in other courses. May be repeated to a maximum of 8 hours. Approved for both letter and S/U grading. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10553	independent study		ARRANGED			
Instructor Approval Required						

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 Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32102	lecture-discussion	C13	10:00 AM - 10:50 AM	MWF	room 141 Altgeld Hall	Tolman, S
Quant Reasoning II course. 3 hours						
39113	lecture-discussion	C14	10:00 AM - 10:50 AM	MWF	room 141 Altgeld Hall	Tolman, S
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

403 **Euclidean Geometry** credit: 3 or 4 hours.

Selected topics from geometry, including the nine-point circle, theorems of Ceva and Menelaus, regular figures, isometries in the plane, ordered and affine geometries, and the inversive plane. 4 hours of credit requires approval

of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241; MATH 347 or 348, or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30344	lecture-discussion	D13	11:00 AM - 11:50 AM	MWF	room 143 Altgeld Hall	Francis, G
Quant Reasoning II course. 3 hours						
39114	lecture-discussion	D14	11:00 AM - 11:50 AM	MWF	room 143 Altgeld Hall	Francis, G
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						
54928	online	XM	ARRANGED			Francis, G; Woods, D
Quant Reasoning II course. This is an open enrollment section and all degree and nondegree students are eligible to enroll. For off-campus nondegree students, Academic Outreach restrictions and assessments may apply, see http://www.outreach.uiuc.edu . Online						

406 **History of Calculus** credit: 3 or 4 hours.

Examination of the historical origins and genesis of the concepts of the calculus; includes mathematical developments from the ancient Greeks to the eighteenth century. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30347	lecture-discussion	G13	03:00 PM - 03:50 PM	MWF	room 341 Altgeld Hall	Junge, M
Quant Reasoning II course. 3 hours						
39115	lecture-discussion	G14	03:00 PM - 03:50 PM	MWF	room 341 Altgeld Hall	Junge, M
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

409 **Actuarial Statistics II** credit: 4 hours.

Same as STAT 409. See STAT 409.

CRN	Type	Section	Time	Days	Location	Instructor
33410	discussion-recitation	AD1	03:00 PM - 03:50 PM	T	room 431 Armory	Xu, J

33333	discussion-recitation	AD2	04:00 PM - 04:50 PM	T	room 431 Armory	Xu, J
45595	discussion-recitation	AD3	02:00 PM - 02:50 PM	T	room 432 Armory	Xu, J
35092	lecture	AL1	02:00 PM - 02:50 PM	MWF	room 103 Talbot Laboratory	Stepanov, A

410 **Lin Algebra & Financial Apps** credit: 3 or 4 hours.

Emphasizes techniques of linear algebra and introductory and advanced applications to actuarial science, finance and economics. Topics include linear equations, matrix theory, vector spaces, linear transformations, eigenvalues and eigenvectors and inner product spaces. In addition, current research topics such as modeling, data mining, and generalized linear models are explored. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 410 and MATH 125, MATH 225, or MATH 415. Prerequisite: MATH 241; MATH 210 or FIN 221; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
54380	lecture-discussion	G1	03:00 PM - 03:50 PM	MWF	room 245 Altgeld Hall	Nevins, T
Restricted to Actuarial Science major(s). 3 hours						

412 **Graph Theory** credit: 3 or 4 hours.

Examines basic concepts and applications of graph theory, where graph refers to a set of vertices and edges that join some pairs of vertices; topics include subgraphs, connectivity, trees, cycles, vertex and edge coloring, planar graphs and their colorings. Draws applications from computer science, operations research, chemistry, the social sciences, and other branches of mathematics, but emphasis is placed on theoretical aspects of graphs. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience or CS 373.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30348	lecture-discussion	E13	01:00 PM - 01:50 PM	MWF	room 341 Altgeld Hall	Vijay, S
Quant Reasoning II course. 3 hours						
39116	lecture-discussion	E14	01:00 PM - 01:50 PM	MWF	room 341 Altgeld Hall	Vijay, S
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

413 **Intro to Combinatorics** credit: 3 or 4 hours.

Permutations and combinations, generating functions, recurrence relations, inclusion and exclusion, Polya's theory of counting, and block designs. Same as CS 413. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: MATH 347 or MATH 348 or equivalent experience.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
33533	lecture-discussion	F13	02:00 PM - 02:50 PM	MWF	room 347 Altgeld Hall	Yong, A
Quant Reasoning II course. 3 hours						
39117	lecture-discussion	F14	02:00 PM - 02:50 PM	MWF	room 347 Altgeld Hall	Yong, A
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

415 **Applied Linear Algebra** credit: 3 or 4 hours.

Introductory course emphasizing techniques of linear algebra with applications to engineering; topics include matrix operations, determinants, linear equations, vector spaces, linear transformations, eigenvalues, and eigenvectors, inner products and norms, orthogonality, equilibrium, and linear dynamical systems. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 415 and any of MATH 125, MATH 225, or MATH 410. Prerequisite: MATH 241 or consent of instructor.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
34503	lecture-discussion	C13	10:00 AM - 11:40 AM	MWF	room 1105 Siebel Center for Comp Sci	Kedem, R
Quant Reasoning II course. 3 hours Meets 19-Oct-09 - 09-Dec-09.						
39124	lecture-discussion	C14	10:00 AM - 11:40 AM	MWF	room 1105 Siebel Center for Comp Sci	Kedem, R
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign. Meets 19-Oct-09 - 09-Dec-09.						
34430	lecture-discussion	D13	11:00 AM - 11:50 AM	MWF	room 245 Altgeld Hall	Guillou, B
Quant Reasoning II course. 3 hours						
39120	lecture-discussion	D14	11:00 AM - 11:50 AM	MWF	room 245 Altgeld Hall	Guillou, B
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						
34374	lecture-discussion	E13	01:00 PM - 01:50 PM	MWF	room 245 Altgeld Hall	Malkin, A
Quant Reasoning II course. 3 hours						

39118	lecture-discussion	E14	01:00 PM - 01:50 PM	MWF	room 245 Altgeld Hall	Malkin, A
Quant Reasoning II course. 4 hours Instructor Approval RequiredRestricted to Graduate - Urbana-Champaign.						
34393	laboratory-discussion	F83	02:00 PM - 02:50 PM	MWF	room 245 Altgeld Hall	Schultz, A
Quant Reasoning II course. 3 hours Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						
39119	laboratory-discussion	F84	02:00 PM - 02:50 PM	MWF	room 245 Altgeld Hall	Schultz, A
Quant Reasoning II course. 4 hours Instructor Approval RequiredUses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.Restricted to Graduate - Urbana-Champaign.						
34411	lecture-discussion	M13	09:30 AM - 10:50 AM	TR	room 245 Altgeld Hall	Bradlow, S
Quant Reasoning II course. 3 hours						
52570	lecture-discussion	M14	09:30 AM - 10:50 AM	TR	room 245 Altgeld Hall	Bradlow, S
Quant Reasoning II course. 4 hours Departmental Approval Required						
34419	lecture-discussion	N13	11:00 AM - 12:20 PM	TR	room 245 Altgeld Hall	Bergvelt, M
Quant Reasoning II course. 3 hours						
39121	lecture-discussion	N14	11:00 AM - 12:20 PM	TR	room 245 Altgeld Hall	Bergvelt, M
Quant Reasoning II course. 4 hours Instructor Approval RequiredRestricted to Graduate - Urbana-Champaign.						
52112	lecture-discussion	Q13	12:30 PM - 01:50 PM	TR	room 245 Altgeld Hall	Rosenblatt, J
Quant Reasoning II course. 3 hours						
39122	lecture-discussion	Q14	12:30 PM - 01:50 PM	TR	room 245 Altgeld Hall	Rosenblatt, J
Quant Reasoning II course. 4 hours Instructor Approval RequiredRestricted to Graduate - Urbana-Champaign.						
40196	laboratory-discussion	Z83	ARRANGED			Schultz, A
Quant Reasoning II course. 3 hours Section Z83 will be taught asynchronously. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for further details.						
46444	laboratory-discussion	Z84	ARRANGED			Schultz, A
Quant Reasoning II course. 4 hours Instructor Approval RequiredSection Z84 will be taught asynchronously. Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for further details.						

416 **Abstract Linear Algebra** credit: 3 or 4 hours.

Rigorous proof-oriented course in linear algebra. Topics include determinants, vector spaces over fields, linear transformations, inner product spaces, eigenvectors and eigenvalues, Hermitian matrices, Jordan Normal Form. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or consent of instructor; MATH 347 is recommended.

CRN	Type	Section	Time	Days	Location	Instructor
51390	lecture-discussion	B3H	09:00 AM - 09:50 AM	MWF	room 341 Altgeld Hall	Tolman, S
3 hours Departmental Approval Required Honors section. Not intended for Graduate - Urbana-Champaign.						
51391	lecture-discussion	B4H	09:00 AM - 09:50 AM	MWF	room 341 Altgeld Hall	Tolman, S
4 hours Departmental Approval Required Not intended for Graduate - Urbana-Champaign.						
51392	lecture-discussion	M13	09:30 AM - 10:50 AM	TR	room 241 Altgeld Hall	Dutta, S
51393	lecture-discussion	M14	09:30 AM - 10:50 AM	TR	room 241 Altgeld Hall	Dutta, S

417 **Intro to Abstract Algebra** credit: 3 or 4 hours.

Fundamental theorem of arithmetic, congruences. Permutations. Groups and subgroups, homomorphisms. Group actions with applications. Polynomials. Rings, subrings, and ideals. Integral domains and fields. Roots of polynomials. Maximal ideals, construction of fields. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: Either MATH 416 or one of MATH 410, MATH 415 together with one of MATH 347, MATH 348, CS 373; or consent of instructor.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32108	lecture-discussion	C13	10:00 AM - 10:50 AM	MWF	room 149 Henry Administration Bldg	Ando, M
Quant Reasoning II course. 3 hours						
32110	lecture-discussion	C14	10:00 AM - 10:50 AM	MWF	room 149 Henry Administration Bldg	Ando, M
Quant Reasoning II course. 4 hours Instructor Approval Required						

423 **Differential Geometry** credit: 3 or 4 hours.

Applications of the calculus to the study of the shape and curvature of curves and surfaces; introduction to vector fields, differential forms on Euclidean spaces, and the method of moving frames for low-dimensional differential geometry. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30352	lecture-discussion	S13	02:00 PM - 03:20 PM	TR	room 260 Mechanical Engineering Bldg	Kerman, E
Quant Reasoning II course. 3 hours						
39127	lecture-discussion	S14	02:00 PM - 03:20 PM	TR	room 260 Mechanical Engineering Bldg	Kerman, E
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

424 **Honors Real Analysis** credit: 3 hours.

A rigorous treatment of basic real analysis via metric spaces. Metric space topics include continuity, compactness, completeness, connectedness and uniform convergence. Analysis topics include the theory of differentiation, Riemann-Darboux integration, sequences and series of functions, and interchange of limiting operations. As part of the honors sequence, this course will be rigorous and abstract. No graduate credit. Approved for honors grading. Prerequisite: An honors section of MATH 347 or an honors section of MATH 416, and consent of the department.

CRN	Type	Section	Time	Days	Location	Instructor
47761	lecture-discussion	X	12:00 PM - 12:50 PM	MWF	room 345 Altgeld Hall	Henson, C
Departmental Approval Required Restricted to Undergrad - Urbana-Champaign.						

427 **Honors Abstract Algebra** credit: 3 hours.

Group theory, counting formulae, factorization, modules with applications to Abelian groups and linear operators. As part of the honors sequence, this course will be rigorous and abstract. No graduate credit. Approved for honors grading. Credit is not given for both MATH 427 and MATH 417. Prerequisite: Consent of the department is required. Prerequisite courses are either an honors section of MATH 416, or MATH 415 together with an honors section of MATH 347.

CRN	Type	Section	Time	Days	Location	Instructor
49850	lecture-discussion	G	01:00 PM - 01:50 PM	MWF	room 147 Altgeld Hall	Rezk, C
Departmental Approval Required Restricted to Undergrad - Urbana-Champaign. Topic: Abstract Algebra. See http://www.math.uiuc.edu/timetable/ for the full course description.						

441 **Differential Equations** credit: 3 or 4 hours.

Basic course in ordinary differential equations; topics include existence and uniqueness of solutions and the general theory of linear differential equations; treatment is more rigorous than that given in MATH 285. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Credit is not given for both

MATH 441 and any of MATH 284, MATH 285, MATH 286. Prerequisite: MATH 241. Recommended: MATH 347 or MATH 348.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32116	lecture-discussion	B13	09:00 AM - 09:50 AM	MWF	room 143 Altgeld Hall	Hur, M
Quant Reasoning II course. 3 hours						
32118	lecture-discussion	B14	09:00 AM - 09:50 AM	MWF	room 143 Altgeld Hall	Hur, M
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						
32120	lecture-discussion	F13	02:00 PM - 02:50 PM	MWF	room 145 Altgeld Hall	Hur, M
Quant Reasoning II course. 3 hours						
32123	lecture-discussion	F14	02:00 PM - 02:50 PM	MWF	room 145 Altgeld Hall	Hur, M
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

442 **Intro Partial Diff Equations** credit: 3 or 4 hours.

Introduces partial differential equations, emphasizing the wave, diffusion and potential (Laplace) equations.

Focuses on understanding the physical meaning and mathematical properties of solutions of partial differential equations. Includes fundamental solutions and transform methods for problems on the line, as well as separation of variables using orthogonal series for problems in regions with boundary. Covers convergence of Fourier series in detail. 4 hours of credit requires approval of the instructor and completion of additional work of substance.

Prerequisite: One of MATH 284, MATH 285, MATH 286, MATH 441.

CRN	Type	Section	Time	Days	Location	Instructor
30354	lecture-discussion	C13	10:00 AM - 10:50 AM	MWF	room 241 Altgeld Hall	DeVille, R
39129	lecture-discussion	C14	10:00 AM - 10:50 AM	MWF	room 241 Altgeld Hall	DeVille, R
4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

444 **Elementary Real Analysis** credit: 3 or 4 hours.

Careful treatment of the theoretical aspects of the calculus of functions of a real variable; topics include the real number system, limits, continuity, derivatives, and the Riemann integral. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 444 and MATH 447. Prerequisite: MATH 241; MATH 347 or MATH 348, or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32129	lecture-discussion	C13	10:00 AM - 10:50 AM	MWF	room 243 Altgeld Hall	Lebl, J
Quant Reasoning II course. 3 hours						
32130	lecture-discussion	C14	10:00 AM - 10:50 AM	MWF	room 243 Altgeld Hall	Lebl, J
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						
32125	lecture-discussion	F13	02:00 PM - 02:50 PM	MWF	room 141 Altgeld Hall	Li, X
Quant Reasoning II course. 3 hours						
32127	lecture-discussion	F14	02:00 PM - 02:50 PM	MWF	room 141 Altgeld Hall	Li, X
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						
32132	lecture-discussion	Q13	12:30 PM - 01:50 PM	TR	room 165 Noyes Laboratory	Mei, T
Quant Reasoning II course. 3 hours						
32134	lecture-discussion	Q14	12:30 PM - 01:50 PM	TR	room 165 Noyes Laboratory	Mei, T
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

446 **Applied Complex Variables** credit: 3 or 4 hours.

For students who desire a working knowledge of complex variables; covers the standard topics and gives an introduction to integration by residues, the argument principle, conformal maps, and potential fields. Students desiring a systematic development of the foundations of the subject should take MATH 448. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 446 and MATH 448. Prerequisite: MATH 241 or MATH 380; or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
30355	lecture-discussion	E13	01:00 PM - 01:50 PM	MWF	room 347 Altgeld Hall	Wu, J
39130	lecture-discussion	E14	01:00 PM - 01:50 PM	MWF	room 347 Altgeld Hall	Wu, J
4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

447 **Real Variables** credit: 3 or 4 hours.

Careful development of elementary real analysis including such topics as completeness property of the real number system; basic topological properties of n -dimensional space; convergence of numerical sequences and series of functions; properties of continuous functions; and basic theorems concerning differentiation and Riemann integration. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and

completion of additional work of substance. Credit is not given for both MATH 447 and MATH 444. Prerequisite: MATH 241 or equivalent; junior standing; MATH 347 or MATH 348, or equivalent experience; or consent of instructor.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32136	lecture-discussion	P13	11:00 AM - 12:20 PM	TR	room 328 Armory	Hinkkanen, A
Quant Reasoning II course. 3 hours						
32137	lecture-discussion	P14	11:00 AM - 12:20 PM	TR	room 328 Armory	Hinkkanen, A
Quant Reasoning II course. 4 hours Instructor Approval Required						

448 **Complex Variables** credit: 3 or 4 hours.

For students who desire a rigorous introduction to the theory of functions of a complex variable; topics include Cauchy's theorem, the residue theorem, the maximum modulus theorem, Laurent series, the fundamental theorem of algebra, and the argument principle. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 448 and MATH 446. Prerequisite: MATH 241 or MATH 380; MATH 447.

CRN	Type	Section	Time	Days	Location	Instructor
30356	lecture-discussion	D13	11:00 AM - 11:50 AM	MWF	room 142 Henry Administration Bldg	Loeb, P
39131	lecture-discussion	D14	11:00 AM - 11:50 AM	MWF	room 142 Henry Administration Bldg	Loeb, P
4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

450 **Numerical Analysis** credit: 3 or 4 hours.

Same as CS 450, CSE 401 and ECE 491. See CS 450.

CRN	Type	Section	Time	Days	Location	Instructor
36039	lecture-discussion	B3	09:00 AM - 09:50 AM	MWF	room 1310 Digital Computer Laboratory	Bond, S
36042	lecture-discussion	B4	09:00 AM - 09:50 AM	MWF	room 1310 Digital Computer Laboratory	Bond, S
4 hours Restricted to Graduate - Urbana-Champaign.						

453 **Elementary Theory of Numbers** credit: 3 or 4 hours.

Basic introduction to the theory of numbers. Core topics include divisibility, primes and factorization, congruences, arithmetic functions, quadratic residues and quadratic reciprocity, primitive roots and orders. Additional topics covered at the discretion of the instructor include sums of squares, Diophantine equations, continued fractions, Farey fractions, recurrences, and applications to primality testing and cryptography. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Prerequisite: MATH 241 or equivalent.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
32140	lecture-discussion	X13	12:00 PM - 12:50 PM	MWF	room 143 Altgeld Hall	Stolarsky, K
Quant Reasoning II course. 3 hours						
32144	lecture-discussion	X14	12:00 PM - 12:50 PM	MWF	room 143 Altgeld Hall	Stolarsky, K
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

461 **Probability Theory** credit: 3 or 4 hours.

Introduction to mathematical probability; includes the calculus of probability, combinatorial analysis, random variables, expectation, distribution functions, moment-generating functions, and central limit theorem. Same as STAT 451. 4 hours of credit requires approval of the instructor and department with completion of additional work of substance. Credit is not given for both MATH 461 and either MATH 408 or ECE 313. Prerequisite: MATH 241 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
33569	laboratory-discussion	C83	10:00 AM - 10:50 AM	MWF	room 156 Henry Administration Bldg	Reznick, B
3 hours Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details.						
39136	laboratory-discussion	C84	10:00 AM - 10:50 AM	MWF	room 156 Henry Administration Bldg	Reznick, B
4 hours Instructor Approval Required Uses Mathematica courseware. See http://www.math.uiuc.edu/timetable/ for details. Restricted to Graduate - Urbana-Champaign.						
33542	lecture-discussion	D13	11:00 AM - 11:50 AM	MWF	room 2 Illini Hall	Tzirakis, N
39133	lecture-discussion	D14	11:00 AM - 11:50 AM	MWF	room 2 Illini Hall	Tzirakis, N
4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

39200	lecture-discussion	F13	02:00 PM - 02:50 PM	MWF	room 241 Altgeld Hall	Bauer, R
39201	lecture-discussion	F14	02:00 PM - 02:50 PM	MWF	room 241 Altgeld Hall	Bauer, R
4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						
39204	lecture-discussion	X13	12:00 PM - 12:50 PM	MWF	room 148 Henry Administration Bldg	Sowers, R
39205	lecture-discussion	X14	12:00 PM - 12:50 PM	MWF	room 148 Henry Administration Bldg	Sowers, R
4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

463 **Statistics and Probability I** credit: 4 hours.
Same as STAT 400. See STAT 400.

Students must register for one discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
33413	discussion-recitation	AD1	03:00 PM - 03:50 PM	T	room 243 Mechanical Engineering Bldg	Bawawana, B
33376	discussion-recitation	AD2	03:00 PM - 03:50 PM	R	room 243 Mechanical Engineering Bldg	Xia, J
33474	discussion-recitation	AD3	04:00 PM - 04:50 PM	W	room 138 Henry Administration Bldg	Bawawana, B
49240	discussion-recitation	AD4	03:00 PM - 03:50 PM	W	room 166 Education Bldg	Xia, J
49242	discussion-recitation	AD5	03:00 PM - 03:50 PM	R	room 153 Mechanical Engineering Bldg	Bawawana, B
38763	lecture	AL1	11:00 AM - 11:50 AM	MWF	room 116 Roger Adams Laboratory	Monrad, D
46965	discussion-recitation	BD1	03:00 PM - 03:50 PM	T	room 311 Gregory Hall	Dalpiaz, D
35042	discussion-recitation	BD2	03:00 PM - 03:50 PM	W	room 156 Henry Administration Bldg	Dalpiaz, D

35014	discussion-recitation	BD3	04:00 PM - 04:50 PM	W	room 143 Altgeld Hall	Dalpiaz, D
49235	discussion-recitation	BD4	04:00 PM - 04:50 PM	W	room 156 Henry Administration Bldg	Feng, Y
49237	discussion-recitation	BD5	03:00 PM - 03:50 PM	T	room 153 Mechanical Engineering Bldg	Feng, Y
38764	lecture	BL1	12:30 PM - 01:50 PM	TR	room 151 Everitt Elec and Comp Engr Lab	Chen, Y

464 **Statistics and Probability II** credit: 3 or 4 hours.
Same as STAT 410. See STAT 410.

CRN	Type	Section	Time	Days	Location	Instructor
35497	lecture-discussion	G4	10:00 AM - 10:50 AM	MWF	room 101 Transportation Bldg	Stepanov, A
4 hours Restricted to Graduate - Urbana-Champaign.						
35710	lecture-discussion	U3	10:00 AM - 10:50 AM	MWF	room 101 Transportation Bldg	Stepanov, A
3 hours Restricted to Undergrad - Urbana-Champaign.						

469 **Methods of Applied Statistics** credit: 3 or 4 hours.
Same as STAT 420. See STAT 420.

CRN	Type	Section	Time	Days	Location	Instructor
35490	lecture-discussion	G4	09:30 AM - 10:50 AM	TR	room 229 Natural History Bldg	Stepanov, A
4 hours Restricted to Graduate - Urbana-Champaign.						
35714	lecture-discussion	U3	09:30 AM - 10:50 AM	TR	room 229 Natural History Bldg	Stepanov, A
3 hours Restricted to Undergrad - Urbana-Champaign.						

471 **Actuarial Theory I** credit: 4 hours.
Distribution of the time-to-death random variable for a single life, and its implications for evaluations of insurance and annuity functions, net premiums, and reserves. Prerequisite: MATH 408 and MATH 210.

Students must register for one discussion and one lecture section.

CRN	Type	Section	Time	Days	Location	Instructor
32153	discussion-recitation	AD1	03:00 PM - 03:50 PM	R	room 341 Altgeld Hall	Chen, S
32158	discussion-recitation	AD2	04:00 PM - 04:50 PM	R	room 341 Altgeld Hall	Chen, S
46078	discussion-recitation	AD3	02:00 PM - 02:50 PM	R	room 343 Altgeld Hall	Chen, S
Restricted to Actuarial Science major(s).						
54600	discussion-recitation	AD4	12:00 PM - 12:50 PM	R	room 145 Altgeld Hall	Chen, S
46076	lecture	AL1	11:00 AM - 11:50 AM	MWF	room 120 Architecture Bldg	Johnson, P
54381	lecture	AL2	01:00 PM - 01:50 PM	MWF	room 140 Burrill Hall	Johnson, P
Restricted to Actuarial Science major(s).						

473 **Algorithms** credit: 0 to 4 hours.
Same as CS 473 and CSE 414. See CS 473.

CRN	Type	Section	Time	Days	Location	Instructor
51505	discussion-recitation	AD1	05:00 PM - 05:50 PM	T	room 1302 Siebel Center for Comp Sci	Chekuri, C
51508	discussion-recitation	AD3	02:00 PM - 02:50 PM	W	room 1111 Siebel Center for Comp Sci	Chekuri, C
51509	discussion-recitation	AD4	03:00 PM - 03:50 PM	W	room 1111 Siebel Center for Comp Sci	Chekuri, C
43367	lecture-discussion	AL1	11:00 AM - 12:15 PM	TR	room 1404 Siebel Center for Comp Sci	Chekuri, C
3 hours This course is for UNDERGRADUATE students, only. Restricted to Undergrad - Urbana-Champaign.						

476 **Actuarial Risk Theory** credit: 3 or 4 hours.
Mathematical analysis of the risk to an insurer due to variations in expected claim numbers and amounts; optimal insurance systems; the probability of ruin in the long run; reinsurance; dividend formulas. 3 undergraduate hours. 3 or 4 graduate hours. 4 hours of credit requires approval of the instructor and completion of additional work of substance. Prerequisite: Credit or concurrent registration in STAT 409 or STAT 410.

CRN	Type	Section	Time	Days	Location	Instructor
30806	lecture-discussion	L13	08:00 AM - 09:20 AM	TR	room 103 Talbot Laboratory	Gorvett, R
Restricted to Actuarial Science major(s). Restricted to Undergrad - Urbana-Champaign. 3 hours						

484 **Nonlinear Programming** credit: 3 or 4 hours.

Iterative and analytical solutions of constrained and unconstrained problems of optimization; gradient and conjugate gradient solution methods; Newton's method, Lagrange multipliers, duality and the Kuhn-Tucker theorem; and quadratic, convex, and geometric programming. 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; MATH 415 or equivalent; or consent of instructor.

This course satisfies the General Education Criteria for a Quant Reasoning II course.

CRN	Type	Section	Time	Days	Location	Instructor
30809	lecture-discussion	D13	11:00 AM - 11:50 AM	MWF	room 443 Altgeld Hall	Vijay, S
Quant Reasoning II course. 3 hours						
39140	lecture-discussion	D14	11:00 AM - 11:50 AM	MWF	room 443 Altgeld Hall	Vijay, S
Quant Reasoning II course. 4 hours Instructor Approval Required Restricted to Graduate - Urbana-Champaign.						

490 **Advanced Topics in Mathematics** credit: 1 to 4 hours.

Deals with selected topics and applications of mathematics; see Class Schedule or department office for current topics. May be repeated with approval. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
49165	lecture-discussion	M13	09:30 AM - 10:50 AM	TR	room 151 Everitt Elec and Comp Engr Lab	Gorvett, R

494 **Time Series Analysis** credit: 3 or 4 hours.

Same as STAT 429. See STAT 429.

CRN	Type	Section	Time	Days	Location	Instructor
35483	lecture-discussion	G4	09:00 AM - 09:50 AM	MWF	room 163 Everitt Elec and Comp Engr Lab	Shao, X
4 hours Restricted to Graduate - Urbana-Champaign.						

35717	lecture-discussion	U3	09:00 AM - 09:50 AM	MWF	room 163 Everitt Elec and Comp Engr Lab	Shao, X
3 hours Restricted to Undergrad - Urbana-Champaign.						

499 **Introduction Graduate Research** credit: 1 hours.

Seminar is required of all first-year graduate students in Mathematics. It provides a general introduction to the courses and research work in all of the areas of mathematics that are represented at the University of Illinois at Urbana-Champaign. Approved for S/U grading only. May be repeated to a maximum of 2 hours. Prerequisite: Graduate standing or consent of instructor.

This course must be taken by all first year graduate students in the department of mathematics.

CRN	Type	Section	Time	Days	Location	Instructor
30812	lecture	H1	04:00 PM - 04:50 PM	M	room 245 Altgeld Hall	McCarthy, R
Restricted to Graduate - Urbana-Champaign. This course is restricted to graduate level students.						

500 **Abstract Algebra I** credit: 4 hours.

Isomorphism theorems for groups, centers of p-groups, simplicity of A_n , Jordan-Holder Theorem; Commutative Rings and Fields, PIDs, UFDs, Gauss's Lemma, splitting fields, Hilbert Basis Theorem, Zariski topology; Modules over Commutative Rings, structure theorem for finitely generated modules over PIDs, with applications to abelian groups and canonical forms for matrices; Zorn's lemma and applications, existence and uniqueness of algebraic closures; Categories and Functors, universal mapping properties, natural transformations, limits and colimits. Prerequisite: MATH 417 and MATH 418.

CRN	Type	Section	Time	Days	Location	Instructor
30815	lecture-discussion	M1	09:30 AM - 10:50 AM	TR	room 165 Noyes Laboratory	Bergvelt, M
Restricted to Graduate - Urbana-Champaign.						

502 **Commutative Algebra** credit: 4 hours.

Commutative rings and modules, prime ideals, localization, noetherian rings, primary decomposition, integral extensions and Noether normalization, the Nullstellensatz, dimension, flatness, Hensel's lemma, graded rings, Hilbert polynomial, valuations, regular rings, singularities, unique factorization, homological dimension, depth, completion. Possible further topics: smooth and etale extensions, ramification, Cohen-Macaulay modules, complete intersections. Prerequisite: MATH 501 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
30817	lecture-discussion	P1	11:00 AM - 12:20 PM	TR	room 443 Altgeld Hall	Dutta, S
Restricted to Graduate - Urbana-Champaign.						

505 **Homological Algebra** credit: 4 hours.

Definition and properties of the functors Ext and Tor; projective, injective, and flat modules; group extensions; dimensions of rings, and Hilbert theorem on syzygies. Prerequisite: MATH 501 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
30818	lecture-discussion	S1	02:00 PM - 03:20 PM	TR	room 145 Altgeld Hall	Mineyev, I
Not intended for Undergrad - Urbana-Champaign.						

518 **Differentiable Manifolds I** credit: 4 hours.

Definitions and properties of differentiable manifolds and maps, (co)tangent bundles, vector fields and flows, Frobenius theorem, differential forms, exterior derivatives, integration and Stokes' theorem, DeRham cohomology, inverse function theorem, Sard's theorem, transversality and intersection theory. Prerequisite: MATH 423 or MATH 481, or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
52652	lecture-discussion	P1	11:00 AM - 12:20 PM	TR	room 136 Burrill Hall	Kerman, E
Restricted to Graduate - Urbana-Champaign.						

522 **Lie Groups and Lie Algebras I** credit: 4 hours.

A general introduction to Lie groups and algebras and their representation theory. Theory of finite group representations, Lie groups as matrix groups, and as differentiable manifolds, Lie algebras as tangent spaces and as abstract objects, and their representations. Examples of the classical groups. May be repeated up to 8 hours. Prerequisite: Undergraduate linear algebra, abstract algebra, point set topology, differentiation on manifolds.

CRN	Type	Section	Time	Days	Location	Instructor
39210	lecture-discussion	D1	11:00 AM - 11:50 AM	MWF	room 441 Altgeld Hall	Lerman, E
Restricted to Graduate - Urbana-Champaign.						

525 **Topology** credit: 4 hours.

Winding numbers, singular and de Rahm homology and cohomology in dimension zero and one, fixed point theorems, Jordan curve theorem, covering spaces, fundamental groups, classification of surfaces, van Kampen Theorem, singular homology, Eilenberg-Steenrod axioms, homology groups of surfaces. Prerequisite: MATH 417 and MATH 448 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
30821	lecture-discussion	C1	10:00 AM - 10:50 AM	MWF	room 445 Altgeld Hall	Dunfield, N

Restricted to Graduate - Urbana-Champaign.

527 **Homotopy Theory** credit: 4 hours.

Homotopy groups, fibrations and cofibrations, Hurewicz theorem, obstruction theory, Whitehead theorem and additional topics perhaps drawn from Postnikov towers, Freudenthal suspension theorem, Blakers-Massey theorem, spectra. Prerequisite: MATH 526. MATH 501 is recommended but not required.

CRN	Type	Section	Time	Days	Location	Instructor
30822	lecture-discussion	G1	03:00 PM - 03:50 PM	MWF	room 241 Altgeld Hall	Rezk, C

Restricted to Graduate - Urbana-Champaign.

531 **Analytic Theory of Numbers I** credit: 4 hours.

Problems in number theory treated by methods of analysis; arithmetic functions, Dirichlet series, Riemann zeta function, L-functions, Dirichlet's theorem on primes in progressions, the prime number theorem. Prerequisite: MATH 448 and either MATH 417 or MATH 453.

CRN	Type	Section	Time	Days	Location	Instructor
30823	lecture-discussion	D1	11:00 AM - 11:50 AM	MWF	room 445 Altgeld Hall	Berndt, B

Restricted to Graduate - Urbana-Champaign.

540 **Real Analysis I** credit: 4 hours.

Lebesgue measure on the real line; integration and differentiation of real valued functions of a real variable; and additional topics at discretion of instructor. Prerequisite: MATH 447 or equivalent.

CRN	Type	Section	Time	Days	Location	Instructor
30824	lecture-discussion	C1	10:00 AM - 10:50 AM	MWF	room 341 Altgeld Hall	Nikolaev, I

Restricted to Graduate - Urbana-Champaign.

542 **Complex Variables I** credit: 4 hours.

Topics include the Cauchy theory, harmonic functions, entire and meromorphic functions, and the Riemann mapping theorem. Prerequisite: MATH 446 and MATH 447, or MATH 448.

CRN	Type	Section	Time	Days	Location	Instructor
30825	lecture-discussion	B1	09:00 AM - 09:50 AM	MWF	room 343 Altgeld Hall	Miles, J

Restricted to Graduate - Urbana-Champaign.

545 **Harmonic Analysis** credit: 4 hours.

Harmonic analysis on the circle, the line, and the integers, i.e., Fourier series and transforms; locally compact Abelian groups; convergence and summability; conjugate functions; Hardy spaces; uniqueness; Tauberian theorems; almost-periodic functions; commutative Banach algebras. Prerequisite: MATH 448 and MATH 541; knowledge of Banach spaces.

CRN	Type	Section	Time	Days	Location	Instructor
51379	lecture-discussion	C1	10:00 AM - 10:50 AM	MWF	room 347 Altgeld Hall	Erdogan, M

Restricted to Graduate - Urbana-Champaign.

553 **Partial Differential Equations** credit: 4 hours.

Basic introduction to the study of partial differential equations; topics include: the Cauchy problem, power-series methods, characteristics, classification, canonical forms, well-posed problems, Riemann's method for hyperbolic equations, the Goursat problem, the wave equation, Sturm-Liouville problems and separation of variables, Fourier series, the heat equation, integral transforms, Laplace's equation, harmonic functions, potential theory, the Dirichlet and Neumann problems, and Green's functions. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
30827	lecture-discussion	C1	10:00 AM - 10:50 AM	MWF	room 345 Altgeld Hall	Muncaster, R; Rapti, Z

Restricted to Graduate - Urbana-Champaign.

556 **Methods of Math Physics I** credit: 4 hours.

Course covers several basic mathematical methods of wide use in physics and engineering. Topics will be selected from the following: calculus of variations, Sturm-Liouville theory and eigenvalue problems, Green's functions and generalized functions, Hilbert space techniques. Prerequisite: Advanced Calculus.

CRN	Type	Section	Time	Days	Location	Instructor
30829	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 347 Altgeld Hall	Hundertmark, D

Restricted to Graduate - Urbana-Champaign.

559 **Asymptotic Methods** credit: 4 hours.

Same as NPRES 559, PHYS 522, and TAM 549. See TAM 549.

CRN	Type	Section	Time	Days	Location	Instructor
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54308	lecture-discussion	E	03:00 PM - 04:50 PM	MW	room 165 Everitt Elec and Comp Engr Lab	Stewart, D
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562 **Theory of Probability II** credit: 4 hours.
Continuation of MATH 561. Same as STAT 552. Prerequisite: MATH 561.

CRN	Type	Section	Time	Days	Location	Instructor
33567	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 243 Altgeld Hall	Song, R
Restricted to Graduate - Urbana-Champaign.						

564 **Applied Stochastic Processes** credit: 4 hours.
Introduction to topics such as spectral analysis, filtering theory, and prediction theory of stationary processes; Markov chains and Markov processes. Same as STAT 555. Prerequisite: MATH 446 and MATH 447.

CRN	Type	Section	Time	Days	Location	Instructor
33547	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 445 Altgeld Hall	Siudeja, B
Restricted to Graduate - Urbana-Champaign.						

567 **Topics in Actuarial Theory I** credit: 4 hours.
Selected topics in advanced actuarial science. May be repeated to a maximum of 16 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
49163	lecture-discussion	L14	08:00 AM - 09:20 AM	TR	room 103 Talbot Laboratory	Gorvett, R
Restricted to Graduate - Urbana-Champaign. Restricted to MS:App Mth-Actuarial Sci -UIUC.						

568 **Topics in Actuarial Theory II** credit: 4 hours.
Topics in mathematical theory of actuarial science beyond basic life contingencies, such as graduation of mortality tables, survival models, mathematics of demography. See Class Schedule or department office for current topics. A paper will generally be required. May be repeated to a maximum of 16 hours. Prerequisite: STAT 409 or STAT 410 or equivalent; credit or concurrent registration in MATH 471.

CRN	Type	Section	Time	Days	Location	Instructor
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30830	lecture-discussion	M14	09:30 AM - 10:50 AM	TR	room 151 Everitt Elec and Comp Engr Lab	Gorvett, R
Restricted to Graduate - Urbana-Champaign. Restricted to MS:App Mth-Actuarial Sci -UIUC.						

570 **Mathematical Logic** credit: 4 hours.

Development of first order predicate logic; completeness theorem; formalized number theory and the Godel incompleteness theorem. Prerequisite: MATH 417 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
30831	lecture-discussion	E1	01:00 PM - 01:50 PM	MWF	room 345 Altgeld Hall	Henson, C
Restricted to Graduate - Urbana-Champaign.						

579 **Coding Theory** credit: 4 hours.

Same as CS 577 and ECE 556. See ECE 556.

CRN	Type	Section	Time	Days	Location	Instructor
37139	discussion-recitation	L	09:30 AM - 10:50 AM	TR	room 168 Everitt Elec and Comp Engr Lab	Milenkovic, O

580 **Combinatorial Mathematics** credit: 4 hours.

Fundamental results on core topics of combinatorial mathematics: classical enumeration, basic graph theory, extremal problems on finite sets, probabilistic methods, design theory, discrete optimization. Same as CS 571. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
33562	lecture-discussion	F1	02:00 PM - 02:50 PM	MWF	room 343 Altgeld Hall	West, D
Restricted to Graduate - Urbana-Champaign.						

583 **Partial Orders and Comb Optim** credit: 4 hours.

Combinatorial aspects of partially ordered sets and their relation to optimization problems. Structure of posets and lattices, Dilworth's theorem and generalizations, linear extensions and sorting, dimension of posets, order ideals, extremal set theory, integer programming and minmax relations, matroids and their applications. Prerequisite: MATH 580 or consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
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39209	lecture-discussion	X1	12:00 PM - 12:50 PM	MWF	room 343 Altgeld Hall	West, D
Restricted to Graduate - Urbana-Champaign.						

587 **Optimiz by Vector Space Methds** credit: 4 hours.
Same as ECE 580. See ECE 580.

CRN	Type	Section	Time	Days	Location	Instructor
33574	lecture-discussion	N	09:30 AM - 10:50 AM	TR	room 241 Everitt Elec and Comp Engr Lab	Basar, M

595 **Advanced Topics in Math** credit: 1 to 4 hours.
May be repeated in the same or separate semesters. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
42955	lecture-discussion	AG2	09:30 AM - 10:50 AM	TR	room 243 Altgeld Hall	Li, L
4 hours Topic: Algebraic Geometry II. See http://www.math.uiuc.edu/timetable/ for the full course description. Restricted to Graduate - Urbana-Champaign.						
53550	lecture-discussion	AMA	03:00 PM - 03:50 PM	MWF	room 343 Altgeld Hall	Hildebrand, A
4 hours Topic: Asymptotic Methods in Analysis. See http://www.math.uiuc.edu/timetable/ for the full course description. Restricted to Graduate - Urbana-Champaign.						
51380	lecture-discussion	ANT	01:00 PM - 01:50 PM	MWF	room 443 Altgeld Hall	Duursma, I
4 hours Topic: Algorithmic Number Theory.. See http://www.math.uiuc.edu/timetable/ for the full course description. Restricted to Graduate - Urbana-Champaign.						
53542	lecture-discussion	GHS	12:00 PM - 12:50 PM	MWF	room 443 Altgeld Hall	Mackay, J
2 hours Topic: Gromov Hyperbolic Spaces and their Boundaries. See http://www.math.uiuc.edu/timetable/ for the full course description. Restricted to Graduate - Urbana-Champaign. Meets 24-Aug-09 - 16-Oct-09.						
55232	lecture-discussion	KT	12:00 PM - 12:50 PM	MWF	room 445 Altgeld Hall	Junge, M
2 hours Meets 19-Oct-09 - 09-Dec-09.						
53563	lecture-discussion	LD	11:00 AM - 11:50 AM	MWF	room 345 Altgeld Hall	Sowers, R

2 hours Topic: Large Deviations. See http://www.math.uiuc.edu/timetable/ for the full course description.Restricted to Graduate - Urbana-Champaign.Meets 24-Aug-09 - 16-Oct-09.						
53538	lecture-discussion	MCG	09:00 AM - 09:50 AM	MWF	room 243 Altgeld Hall	Leininger, C
4 hours Topic: Mapping Class Groups. See http://www.math.uiuc.edu/timetable/ for the full course description.Restricted to Graduate - Urbana-Champaign.						
53543	lecture-discussion	MP	04:00 PM - 04:50 PM	MWF	room 141 Altgeld Hall	Kedem, R
2 hours Topic: Macdonald Polynomials. See http://www.math.uiuc.edu/timetable/ for the full course description.Restricted to Graduate - Urbana-Champaign.Meets 19-Oct-09 - 09-Dec-09.						
54652	lecture-discussion	OA	03:00 PM - 03:50 PM	MWF	room 143 Altgeld Hall	Ruan, Z
4 hours Topic: Operator Algebras. See http://www.math.uiuc.edu/timetable/ for the full course description.Restricted to Graduate - Urbana-Champaign.						
53560	lecture-discussion	TIL	02:00 PM - 02:50 PM	MWF	room 341 Altgeld Hall	Solecki, S
4 hours Topic: Topics in Logic. See http://www.math.uiuc.edu/timetable/ for the full course description.Restricted to Graduate - Urbana-Champaign.						
53566	lecture-discussion	TV	12:30 PM - 01:50 PM	TR	room 170 Everitt Elec and Comp Engr Lab	Schenck, H
4 hours Topic: Toric Varieties II. See http://www.math.uiuc.edu/timetable/ for the full course description.Restricted to Graduate - Urbana-Champaign.						

597 **Reading Course** credit: 1 to 8 hours.

Approved for both letter and S/U grading. May be repeated in the same or separate terms to a maximum of 8 hours. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10556	independent study		ARRANGED			
Instructor Approval RequiredRestricted to Graduate - Urbana-Champaign. Instructor Approval Required.						

598 **Literature Seminar in Math** credit: 0 to 4 hours.

Seminar on topics of current interest in mathematics. Students present seminars and discussions on various topics. See Class Schedule for current topics. Recommended for all Mathematics students. Approved for both letter and S/U grading. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
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30833	conference	1	ARRANGED			
Restricted to Graduate - Urbana-Champaign. Departmental Approval RequiredDepartmental Approval Required.						
55270	lecture-discussion	GFT	03:00 PM - 04:50 PM	F	room 347 Altgeld Hall	Wu, J
Restricted to Graduate - Urbana-Champaign. 1 hours						
47921	lecture-discussion	REN	03:00 PM - 03:50 PM	TR	room 447 Altgeld Hall	Berndt, B
Restricted to Graduate - Urbana-Champaign. 2 hours						

599 **Thesis Research** credit: 0 to 16 hours.
 May be repeated. Approved for S/U grading only. Prerequisite: Consent of instructor.

CRN	Type	Section	Time	Days	Location	Instructor
10600	independent study		ARRANGED			
Instructor Approval RequiredRestricted to Graduate - Urbana-Champaign. Instructor Approval Required.						