

# MATHEMATICS: APPLIED MATHEMATICS , BSLAS

for the degree of Bachelor of Science in Liberal Arts & Sciences Major in Mathematics, Applied Mathematics Concentration

**department page:**  
**department website:** <https://math.illinois.edu/academics/undergraduate-program-mathematics>  
**department faculty:** Mathematics Faculty (<https://math.illinois.edu/directory/faculty>)  
**overview of college admissions & requirements:** Liberal Arts & Sciences (<http://catalog.illinois.edu/las>)  
**college website:** <https://las.illinois.edu/>  
**email:** [mathadvising@illinois.edu](mailto:mathadvising@illinois.edu)

A Major Plan of Study form, declaring concentration and supporting coursework, must be completed and submitted to the LAS Student Academic Affairs Office except for students in the Teaching of Mathematics concentration. Please complete this form with an advisor in the Mathematics Undergraduate Office within 1-2 semesters of completing MATH 347 or MATH 348.

**Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.**

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**General education: Students must complete the Campus General Education** (<https://courses.illinois.edu/gened/DEFAULT/DEFAULT>) requirements including the campus general education language requirement.

**Minimum required major and supporting course work: Normally equates to 46-57 hours including 27-35 hours of mathematics beyond calculus, 3-4 hours of computer science, and 12 hours of supporting coursework.**

**Twelve hours of 300- and 400-level in the major must be taken on this campus.**

**Minimum hours required for graduation: 120 hours.**

Code	Title	Hours
<b>Required Core Courses</b>		
MATH 241	Calculus III <sup>1</sup>	4
MATH 347	Fundamental Mathematics	3-4
	or MATH 348 Fundamental Mathematics-ACP	
MATH 416	Abstract Linear Algebra <sup>2</sup>	3
MATH 417	Intro to Abstract Algebra	3
	or MATH 427 Honors Abstract Algebra	
MATH 424	Honors Real Analysis <sup>3</sup>	3
	or MATH 44 Elementary Real Analysis	
	or MATH 44 Real Variables	
MATH 461	Probability Theory <sup>4</sup>	3-4
	or STAT 400 Statistics and Probability I	
CS 101	Intro Computing: Engrg & Sci	3-4
	or CS 125 Intro to Computer Science	
	Approved supporting coursework or any minor	12
<b>Applied Mathematics Courses</b>		
MATH 441	Differential Equations	3
MATH 446	Applied Complex Variables	3
	or MATH 44 Complex Variables	
CS 357	Numerical Methods I	3
	or MATH 44 Intro Partial Diff Equations	
	or MATH 48 Dynamics & Differential Eqns	
MATH 412	Graph Theory	3
	or MATH 41 Intro to Combinatorics	
	or MATH 48 Linear Programming	
	One additional 400- or 500-level Math course	3
<b>Total Hours</b>		<b>49-52</b>

<sup>1</sup> Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.

<sup>2</sup> Beginning in Fall 2012, students may not receive credit for both MATH 416 and either ASRM 406 (formerly MATH 410) or MATH 415. However, if one course is taken prior to Fall 2012, credit may be earned for both MATH 416 and either of ASRM 406 (formerly MATH 410) or MATH 415.

<sup>3</sup> If MATH 424 or MATH 447 is completed, a requirement for the Graduate Preparatory concentration has been satisfied.

<sup>4</sup> If STAT 400 is completed, a requirement for the Operations Research concentration has been satisfied.