

# UNIVERSITY OF SCRANTON

## MATHEMATICS DEGREE REQUIREMENTS

<b>MATHEMATICS</b>	<b>MATH 114</b> <i>Calculus I</i>	<b>CMPS 134/134L</b> <i>Computer Science I</i>	<b>PHYS 140/140L</b> <i>Elements of Physics I</i>	<b>MATH 299</b> <i>Intro to Mathematical Proof</i> <b>MATH 446</b> <i>Real Analysis I</i> <b>MATH 448</b> <i>Modern Algebra I</i>	<b>MATH 447</b> <i>Real Analysis II</i> <b>OR</b> <b>MATH 448</b> <i>Modern Algebra II</i>	6 MATH Electives, at least 1 from each of these categories: "Algebra/Geometry" "Applied" "Analysis"	5 Electives towards a minor, concentration, second major or pre-approved package of courses		
<b>MATH SCIENCES</b> <b>PHYSICAL SCIENCES</b>	<b>MATH 221</b> <i>Calculus II</i>	<b>CHEM 112/112L</b> <i>General &amp; Analytical Chemistry I</i>	<b>PHYS 141/141L</b> <i>Elements of Physics II</i>	<b>CHEM 232/232L</b> <i>Organic Chemistry I</i>	<b>OR</b> <b>PHYS 270/270L</b> <i>Elements of Modern Physics</i> <b>PHYS 352</b> <i>Statistical &amp; Engineering Thermodynamics</i>	2 Electives: • CHEM <b>or</b> • PHYS	<b>MATH 341</b> <i>Differential Equations</i>	<b>MATH 312</b> <i>Probability</i>	<b>MATH 461</b> <i>Complex Variables</i> <b>OR</b> <b>MATH 371</b> <i>Applied Combinatorics</i> • 2 MATH Electives • 2 STEM Electives
<b>MATH SCIENCES</b> <b>BIOLOGICAL SCIENCES</b>		<b>CHEM 113/113L</b> <i>General &amp; Analytical Chemistry II</i>	<b>BIOL 141/141L</b> <i>Gen Biology I</i> <b>BIOL 142/142L</b> <i>Gen Biology II</i>	<b>CHEM 233/233L</b> <i>Organic Chemistry II</i>	<b>OR</b> <b>any 2 of:</b> <b>BIOL 245/245L</b> <i>Gen Physiology</i> <b>BIOL 350/350L</b> <i>Cellular Biology</i> <b>BIOL 351/351L</b> <i>Dev Biology</i> <b>BIOL 370/370L</b> <i>Animal Behavior</i> <b>BIOL 371/371L</b> <i>Ecology</i> <b>BIOL 374/374L</b> <i>Vertebrate Biology</i>	2 Electives: • BCMB • BIOL • CHEM • NEUR <b>or</b> • PSIO	<b>MATH 441</b> <i>Partial Differential Equations</i>	<b>OR</b>	<b>MATH 463</b> <i>Topics in Biomathematics</i> • 2 MATH Electives • 2 STEM Electives
<b>MATH SCIENCES</b> <b>COMPUTER &amp; INFO SCIENCE</b>	<b>MATH 222</b> <i>Calculus III</i>	<b>CMPS 134/134L</b> <i>Computer Science I</i>	<b>MATH 142</b> <i>Discrete Struct</i> <b>CMPS 250</b> <i>Machine Org &amp; Assembly Language</i>	<b>PHYS 140/140L</b> <i>Elements of Physics I</i>	<b>CHEM 112/112L</b> <i>General &amp; Analytical Chemistry I</i>	2 Electives: • CMPS <b>or</b> • DS	<b>MATH 371</b> <i>Applied Combinatorics</i>	<b>MATH 361</b> <i>Numerical Analysis</i>	<b>MATH 360</b> <i>Coding Theory</i> <b>MATH 368</b> <i>Cryptography</i> • 2 MATH Electives • 2 STEM Electives
<b>MATH SCIENCES</b> <b>DATA SCIENCE</b>		<b>CMPS 144/144L</b> <i>Computer Science II</i>	<b>PHYS 141/141L</b> <i>Elements of Physics II</i>	<b>CHEM 113/113L</b> <i>General &amp; Analytical Chemistry II</i>	<b>BIOL 141/141L</b> <i>General Biology I</i>			<b>BIOL 142/142L</b> <i>General Biology II</i>	<b>MATH 371</b> <i>Applied Combinatorics</i>
<b>MATH SCIENCES</b> <b>ACTUARIAL SCIENCE</b>	<b>MATH 351</b> <i>Linear Algebra</i>	<b>CMPS 240</b> <i>Data Structures &amp; Algorithms</i>	<b>DS 201</b> <i>Introduction to Data Science</i>	<b>PHYS 141/141L</b> <i>Elements of Physics II</i>	<b>CHEM 113/113L</b> <i>General &amp; Analytical Chemistry II</i>	2 Electives: • ACC • ECO • FIN <b>or</b> • DS	<b>MATH 330</b> <i>Actuarial Mathematics</i>	<b>MATH 312</b> <i>Probability</i>	<b>DS 362</b> <i>Data-Driven Knowledge Discovery</i> • 2 MATH Electives • 2 STEM Electives
<b>MATH SCIENCES</b> <b>ACTUARIAL SCIENCE</b>		<b>ECO 153</b> <i>Microeconomics</i> <b>ECO 154</b> <i>Macroeconomics</i> <b>FIN 251</b> <i>Intro to Finance</i>		<b>FIN 362</b> <i>Investments</i> <b>OR</b> <b>FIN 363</b> <i>Intermediate Finance</i>	<b>ACC 251/252</b> <i>Financial Accounting I &amp; II</i> <b>OR</b> <b>ACC 253/254</b> <i>Financial Accounting / Managerial Accounting</i>			<b>MATH 314</b> <i>Mathematical Statistics</i>	<b>MATH 361</b> <i>Numerical Analysis</i>

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