

MATHEMATICS MINOR

MAT

Mathematics Department

Science and Mathematics Complex 159
(716) 878-5621

Program Requirements

| Code | Title | Credit Hours |
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| Required Courses (11-14 credit hours) | | |
| Select one from the following: | | 4-5 |
| MAT 126 | APPLIED CALCULUS I | |
| MAT 161 | CALCULUS I ¹ | |
| Select one from the following: | | 4-5 |
| MAT 127 | APPLIED CALCULUS II | |
| MAT 162 | CALCULUS II ¹ | |
| Select one from the following: | | 3-4 |
| MAT 202 | INTRODUCTION TO LINEAR ALGEBRA | |
| MAT 270 | DISCRETE MATHEMATICS | |
| MAT 263 | CALCULUS III ¹ | |
| Electives (9 credit hours) | | |
| Select from the following: | | 9 |
| MAT 300 | TECHNIQUES OF PROOF (prerequisite: MAT 162 and MAT 270) | |
| MAT 301 | FUNDAMENTALS OF ABSTRACT ALGEBRA (prerequisites: MAT 202 and MAT 300) | |
| MAT 302 | ABSTRACT ALGEBRA II (prerequisite: MAT 301) | |
| MAT 309 | DISCRETE MATHEMATICS II (prerequisite: MAT 270) | |
| MAT 311 | INTRODUCTORY PROBABILITY AND STATISTICS (3 years of HS Regents mathematics) | |
| MAT 315 | DIFFERENTIAL EQUATIONS (prerequisite: MAT 263 or permission of instructor) | |
| MAT 316 | INTERMEDIATE DIFFERENTIAL EQUATIONS (prerequisite: MAT 315) | |
| MAT 318 | MATHEMATICAL MODELING | |
| MAT 319 | MATHEMATICAL BIOLOGY | |

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| MAT 322 | MODERN GEOMETRY (prerequisite: MAT 270 or MAT 300) |
| MAT 325 | PROBABILITY AND STATISTICS (prerequisites: MAT 127 or MAT 162 and MAT 270 or permission of instructor) |
| MAT 351 | ELEMENTARY THEORY OF NUMBERS (4 years of HS Regents mathematics) |
| MAT 370 | APPLIED NETWORKS (prerequisites: MAT 202 and MAT 270) |
| MAT 381 | PROBABILITY THEORY (prerequisites: MAT 270 and MAT 127 or MAT 162. Credit will not be awarded for both MAT 325 and MAT 381) |
| MAT 382 | MATHEMATICAL STATISTICS (prerequisites: MAT 263 and MAT 381) |
| MAT 383 | APPLIED STATISTICS I (prerequisites: MAT 382 or MAT 325 or MAT 311 and MAT 381) |
| MAT 390 | INTRODUCTION TO OPERATIONS RESEARCH (prerequisite: MAT 202 and MAT 270) |
| MAT 401 | INTRODUCTION TO COMPUTABILITY (prerequisites: MAT 270 and either MAT 301 or MAT 351) |
| MAT 404 | APPLICATIONS OF LINEAR ALGEBRA (prerequisites: MAT 263 and MAT 264 and MAT 202) |
| MAT 411 | COMPLEX VARIABLES (prerequisite: MAT 263) |
| MAT 417 | INTRODUCTION TO REAL ANALYSIS I (prerequisite: MAT 263) |
| MAT 418 | INTRODUCTION TO REAL ANALYSIS II (prerequisite: MAT 417) |
| MAT 430 | SET THEORY (prerequisites: MAT 300 with at least a C or PHI 307 with at least a C) |

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| MAT 431 | MATHEMATICAL LOGIC (prerequisite: MAT 300 with at least a C or PHI 307 with at least a C) |
| MAT 461 | NUMERICAL ANALYSIS (prerequisites: MAT 263 and MAT 264 and MAT 202) |
| MAT 471 | INTRODUCTION TO TOPOLOGY (prerequisite: MAT 300 and MAT 301 or MAT 417) |
| MAT 490 | SEMINAR (Permission of Instructor) |
| MAT 491 | CAPSTONE RESEARCH IN MATHEMATICS (prerequisite: MAT 301 or MAT 417 and senior status or permission of instructor) |
| MAT 495 | SPECIAL PROJECT (Permission of Instructor) |
| MAT 499 | INDEPENDENT STUDY (Permission of Instructor) |
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| Total Credit Hours | 20-23 |

¹ MAT 161, MAT 162, and MAT 263 have one-hour co-requisites, MAT 163, MAT 164, MAT 264, respectively.