Mathematics / Secondary Education

Bachelor of Arts (BA.MATH(SEC))

| Core Requir | ements | | Credits | Notes/Instructions | |
|---|--|--|------------------|---|--|
| College Sem. | Quest for Meaning | CSEM 100 | 3 | †A student may be required to take ENGL | |
| Communication & Creative Expression | Writing Oral Communication Literature The Arts | ENGL 110† COMM 101 ENGL 140-149 ARTS 100-149 | 3 3 3 3 | 105 and/or MATH 100 based on placement exams administered prior to their first semester at King's College. ENGL 105 and | |
| Citizenship | History Intercultural Global Connections | HIST 100-149 FREN/GERM/SPAN 100-level or Study Abroad++ ECON 150-199; GEOG 150-199; HIST 150-199; PS 150-199; SOC 150-199 | 3 3 3 | MATH 100 are 3-credit courses and will count as free electives. | |
| Quantitative & Scientific Reasoning | SBM Quantitative Reasoning SBM Scientific Endeavor Science in Context Human Beh. & Soc. Inst | MATH 120 [†] or higher level NSCI 100 NSCI 171-199 ECON 111, 112; GEOG 101, 102; PS 101, PSYC 101, SOC 101 | - - - 3 | Competence requirement can be satisfied by taking a 100- level language class for 3 credits or participating in an approved Study Abroad experience. (See | |
| Wisdom, Faith, & the Good Life | Introduction to Phil. Phil. Investigations Theology & Wisdom Theology & the Good Life | PHIL 101 PHIL 170-199 THEO 150-159 THEO 160-169 | 3 3 3 3 | college catalog for more information) SBM = Satisfied By Major requirement(s) and credit(s) listed below. | |
| | | Total Core Credits | 39 | | |

| Major Requirements | Credits | Major Requirements | Credits | Secondary Education Requirements | Credits |
|-------------------------|---------|------------------------------|---------|-------------------------------------|---------|
| MATH 127 ^{2,5} | 3 | CS 112 | 3 | EDUC 202 | 3 |
| MATH 129 ⁵ | 4 | CS 1xx | 3 | EDUC 231 | 1 |
| MATH 130 | 4 | Science Group ^{2,*} | 3 | EDUC 232 | 1 |
| MATH 231 ⁶ | 4 | Science Group ^{2,*} | 3 | EDUC 235 ³ | 3 |
| MATH 235 ⁶ | 3 | MATH 236 ⁸ | 3 | EDUC 240 ³ | 3 |
| MATH 250 | 4 | MATH 361 | 3 | EDUC 270 ³ | 3 |
| MATH 367 | 3 | MATH 362 | 3 | EDUC 305 ^{3, 4} | 3 |
| MATH 425 | 3 | MATH Elective** | 3 | EDUC 320 ^{3, 4} | 3 |
| MATH 490 | 1 | | | EDUC 350 ^{3,4} | 3 |
| | | | | EDUC 366 ^{3, 4} | 3 |
| | | | | EDUC 440 ⁴ | 3 |
| | | | | EDUC 467 ^{3, 4} | 10 |
| | | | | EDUC 468 ^{3, 4} | 2 |
| | | Other Requirements | | | |
| | | HCE 101 Holy Cross Exp. | 1 | | |
| | | Total Major and | | Total Secondary | |
| Total Major Credits | 29 | Other Credits | 25 | Education Credits | 41 |

Total Credits Required for Graduation = 134

*All students majoring in Mathematics must take one of the Science Groups below (lab portion not required):

| • | Science Group 1* | | Science Group 2* | | Science Group 3* |
|---|------------------|----|------------------|----|---------------------------|
| | CHEM 113 | OR | PHYS 111 | OR | PHYS 113 (Calculus based) |
| | CHEM 114 | | PHYS 112 | | PHYS 114 (Calculus based) |

^{**} One additional Math Elective numbered 300 or Higher

| | MATH Electives | |
|----------|----------------|----------|
| MATH 301 | MATH 365 | MATH 418 |
| MATH 363 | MATH 391 | MATH 420 |
| | | MATH 491 |

NOTE: All Secondary Teacher Certification candidates must complete six credits of college level mathematics and six credits of college level English:

| Math Courses | MATH 129 | MATH 130 |
|-----------------|----------|----------------|
| English Courses | ENGL 110 | ENGL 140 - 149 |

The Pennsylvania Department of Education requires secondary teachers to have a degree in the content area for certification. Students seeking secondary certification must meet with his/her specific content area department for content area courses required for the degree. The Education Division is not responsible for content area or CORE courses for secondary certification candidates.

Mathematics / Secondary Education

Suggested Sequence

A suggested course sequence of degree requirements is listed below. Refer to the college catalog for course titles, descriptions, and prerequisites. Always consult your Academic Advisor when planning and scheduling your classes.

| Fall | Credits | Spring | Cre |
|---|--|---|-----|
| MATH 127 ⁵ Logic & Axiomatics | 3 | MATH 130 Analytic Geometry & Calculus II | |
| MATH 129 ⁵ Analytic Geometry & Calculus I | 4 | MATH 236 ⁸ College Geometry or CS 111 ⁷ Program. | |
| Core Course ¹ | 3 | for Science & Engineering | |
| Core Course ¹ | 3 | EDUC 202 | |
| Core Course ¹ | 3 | Core Course ¹ | |
| HCE 101 Holy Cross Experience | 1 | Core Course ¹ | |
| | 17 | | |
| Summer *** | Credits | | |
| Core Course ¹ | 3 | | |
| | 3 | | |
| Fall | Credits | Spring | Cı |
| MATH 231 ⁶ Analytic Geometry & Calculus III | 4 | MATH 250 Linear Algebra | |
| MATH 235 ⁶ Discrete Mathematics | 3 | MATH 236 ⁸ College Geometry or CS 111 ⁷ Program. | |
| Science Group ^{2,*} | 3 | for Sci. & Engineering | |
| CS 112 ⁸ Intro. to Programming | 3 | Science Group ² ,* | |
| EDUC 235 ³ Sec. Development, Cognition, & Learn | 3 | CORE | |
| - | | EDUC 240 ² Sec. Multicult., Linguistic & Inst. Meth. | |
| | 16 | <u></u> | |
| | | | |
| 1 | | ion Program Candidacy" to the Education Department no | i |
| sooner than the completion of 48 credits and no later | than 65 credits.) | | |
| | | | |
| Summer *** | Credits | | |
| | 3 | | |
| Summer *** Core Course ¹ | 3 3 | | |
| Summer *** Core Course ¹ Fall | 3 3 Credits | Spring | C |
| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeb | 3 3 Credits | MATH 490 Junior Seminar | C |
| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeb MATH 361 Probability & Statistics I | 3 3 Credits ra 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II | C |
| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeb MATH 361 Probability & Statistics I EDUC 270 ³ Introduction to Special Education | 3 3 Credits | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management | C |
| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeb MATH 361 Probability & Statistics I EDUC 270 ³ Introduction to Special Education EDUC 305 ^{3,4} Assessment I OR | 3 3 Credits ra 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners | C |
| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeb MATH 361 Probability & Statistics I EDUC 270 ³ Introduction to Special Education EDUC 305 ^{3,4} Assessment I OR EDUC 320 ^{3,4} Secondary Mathematics Methods | 3 3 Credits ra 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management | C |
| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeb MATH 361 Probability & Statistics I EDUC 270 ³ Introduction to Special Education EDUC 305 ^{3,4} Assessment I OR | 3 3 Credits ra 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners | C |
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| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeby MATH 361 Probability & Statistics I EDUC 270 ³ Introduction to Special Education EDUC 305 ^{3,4} Assessment I OR EDUC 320 ^{3,4} Secondary Mathematics Methods Core Course ¹ / MATH Elective ** | 3 3 Credits ra 3 3 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ | C |
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| Summer *** Core Course¹ Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeb MATH 361 Probability & Statistics I EDUC 2703 Introduction to Special Education EDUC 30534Assessment I OR EDUC 32034 Secondary Mathematics Methods Core Course¹ / MATH Elective** Summer | 3 3 Credits ra 3 3 3 3 15 Credits | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ Core Course ¹ /MATH Elective** | |
| Summer *** Core Course¹ Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeb MATH 361 Probability & Statistics I EDUC 2703 Introduction to Special Education EDUC 30534Assessment I OR EDUC 32034 Secondary Mathematics Methods Core Course¹ / MATH Elective** Summer | 3 3 Credits ra 3 3 3 3 15 Credits | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ Core Course ¹ /MATH Elective** | |
| Summer *** Core Course¹ Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeby MATH 361 Probability & Statistics I EDUC 2703 Introduction to Special Education EDUC 30534 Assessment I OR EDUC 32034 Secondary Mathematics Methods Core Course¹ / MATH Elective** Summer Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeby | 3 3 Credits ra 3 3 3 3 15 Credits | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ Core Course ¹ /MATH Elective** Spring EDUC 467 ^{3,4} Observation & Student Teach. (Sec.) | |
| Summer *** Core Course ¹ Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeb MATH 361 Probability & Statistics I EDUC 2703 Introduction to Special Education EDUC 30534Assessment I OR EDUC 32034 Secondary Mathematics Methods Core Course ¹ / MATH Elective** Summer Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeb Core Course ¹ / MATH Elective** | 3 3 Credits ra 3 3 3 3 15 Credits | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ Core Course ¹ /MATH Elective** Spring EDUC 467 ^{3,4} Observation & Student Teach. (Sec.) EDUC 468 ^{3,4} Student Teaching Seminar | |
| Summer *** Core Course¹ Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeby MATH 361 Probability & Statistics I EDUC 2703 Introduction to Special Education EDUC 3053-4 Assessment I OR EDUC 3203-4 Secondary Mathematics Methods Core Course¹ / MATH Elective** Summer Fall MATH 3679 Real Analysis I OR MATH 4259 Abstract Algeby Core Course¹ / MATH Elective** EDUC 3053-4 Assessment I OR | 3 3 Credits a 3 3 3 3 4 15 Credits Credits Credits 3 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ Core Course ¹ /MATH Elective** Spring EDUC 467 ^{3,4} Observation & Student Teach. (Sec.) | |
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| Summer *** Core Course ¹ Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeby MATH 361 Probability & Statistics I EDUC 270 ³ Introduction to Special Education EDUC 305 ^{3,4} Assessment I OR EDUC 320 ^{3,4} Secondary Mathematics Methods Core Course ¹ / MATH Elective** Summer Fall MATH 367 ⁹ Real Analysis I OR MATH 425 ⁹ Abstract Algeby Core Course ¹ / MATH Elective** EDUC 305 ^{3,4} Assessment I OR EDUC 320 ^{3,4} Secondary Mathematics Methods Core Course ¹ Core Course ¹ Core Course ¹ | 3 3 Credits ra 3 3 3 3 3 15 Credits Credits Credits 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 | MATH 490 Junior Seminar MATH 362 Probability & Statistics II EDUC 350 ^{3,4} Secondary Classroom Management EDUC 366 ^{3,4} Methods For Teaching Diverse Learners Core Course ¹ Core Course ¹ /MATH Elective** Spring EDUC 467 ^{3,4} Observation & Student Teach. (Sec.) EDUC 468 ^{3,4} Student Teaching Seminar | |
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NOTES:

*** 6 credits during Summer Session are suggested in order to finish the degree in four years.

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² Course may satisfy both a Major and a Core requirement.

³ Updated Child Abuse & Criminal Record & FBI Clearances <u>REQUIRED</u> for EDUC 235, EDUC 240, EDUC 320, EDUC 305, EDUC 350, EDUC 366, EDUC 467 and EDUC 468.

 $^{^{4\,5}}$ Courses intended to be taken concurrently. Do not delay taking MATH 127.

⁶ Courses intended to be taken concurrently. Do not delay taking MATH 235.

 $^{^{7}\,\}mathrm{CS}\,100\,\mathrm{or}\,\mathrm{CS}\,120$ may be substituted for CS 111.

 $^{^8}$ MATH 236 offered spring semester even years only. Students should take this course during their 1^{st} or 2^{nd} year.

PR Course has a prerequisite – check college catalog.