# MATHEMATICS

**BACHELOR OF ARTS (B.A.)**

| CORE Requirements | Credits |
|---|---|
| CORE 090 First Yr Exp. | 1 |
| CORE 100 Lib Arts Sem. | 3 |
| CORE 110 Effect Writ. | 3 |
| CORE 115 or 116 Oral Comm. | 3 |
| CORE 131 or 133 Civilization | 3 |
| CORE 140 or 141-145 Forgn. | 3 |
| CORE 150-159 Soc. Sci. [1] **(153[3])** | 3 |
| CORE 160-164 Literature | 3 |
| CORE 170-179 The Arts | 3 |
| CORE 180-189 Amer. Studies[1] | 3 |
| CORE 190-199 Global Studies[1] | 3 |
| CORE 250-259 Syst. Theology | 3 |
| CORE 260-269 Mor. Theology | 3 |
| CORE 280 Philos. I | 3 |
| CORE 281-289 Philos. II | 3 |
| Total Credits for CORE | 43 |

| Major Requirements | Credits |
|---|---|
| MATH 127[5] | 3 |
| MATH 129[5] | 4 |
| MATH 130 | 4 |
| MATH 231[6] | 4 |
| MATH 235[6] | 3 |
| MATH 250 | 4 |
| MATH 367 | 3 |
| MATH 425 | 3 |
| MATH 490 | 1 |
| CS 116/116L | 3 |
| CS 117/117L **or** CS 100 | 3 |
| Science Group* | 3 |
| Science Group* | 3 |

| Major Requirements | Credits |
|---|---|
| MATH Track** | 3 |
| MATH Track** | 3 |
| MATH Track** | 3 |
| MATH Track** | 3 |
| MATH Track** | 3 |
| MATH Track**/Elect | (3) |
| Total Credits for Major | 56 - 59 |

| Free Electives[2] | Credits |
|---|---|
| Free Elective | 3 |
| Free Elective | 3 |
| Free Elective | 3 |
| Free Elective | 3 |
| Free Elective | 3 |
| Free Elective | 3 |
| Free Elective | (3) |
| Total Credits for Free Electives | 18 - 21 |

**Total Credits Required for Graduation = 120**

***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)* |

****In addition to the above, each B. A. Mathematics Major must complete one of the following three tracks:

| MATH Track 1<br>Graduate School | | MATH Track 2<br>Actuary Science, Industry, & Government | | MATH Track 3<br>Secondary Education |
|---|---|---|---|---|
| Students must take five (5) out of the seven (7) mathematics electives listed below. These courses must be numbered 361 or higher and are usually taken in the junior and senior years | | Students must take the following six (6) mathematics courses, usually take in the junior and senior years | | See program planner specifically designed for Math / Secondary Education |
| MATH 361<br>MATH 362<br>MATH 363<br>MATH 365 | MATH 418<br>MATH 420<br>MATH 491 | MATH 301<br>MATH 361<br>MATH 362 | MATH 363<br>MATH 365<br>MATH 418, 420, or 491 | |

[1] Students are required to take one of CORE 150, CORE 180, **OR** CORE 190 to fulfill the Interdisciplinary CORE requirement.

- If a student takes CORE 150, then he/she must choose one from 181 – 188 to fulfill the 18x requirement AND one from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 180, then he/she must choose one from 151 – 158 to fulfill the 15x requirement AND one from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 190, then he/she must choose one from 151 – 158 to fulfill the 15x requirement AND one from 181 – 188 to fulfill the 18x requirement.

[2] Students may select "free electives" for personal enrichment **OR** for Minor and/or Second Major Requirements.
[3] CORE 153 is highly recommended for students on MATH Track 2. (See [1] above.)
[4] ECON 222 is recommended for students on MATH Track 2. MATH 362 substitutes as the ECON 221 prerequisite.
[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.

**General Information:**

A student must earn a minimum of 120 credit hours to be awarded the baccalaureate degree. The number of credit hours required for graduation may be higher in certain major programs **or** if the student elects to pursue a second major.
Beyond the requirements of the Core Curriculum and of a student's chosen major program, the balances of the credit hours required for graduation are "free electives."

See reverse side for a suggested sequence

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## SUGGESTED SEQUENCE

- Use the information below as a guide when selecting courses.
- Refer to the reverse side when selecting major courses, major electives, core courses, and free electives when applicable.
- Consult your Academic Advisor prior to course registration.
- Refer to the King's College Catalog and/or website for course titles and descriptions.
- Choose one course from each CORE category as listed on the reverse side.
- CORE courses may be taken in any order approved by the academic advisor with the following conditions:
    - CORE 100 and CORE 110 should be taken in the first year.
    - CORE 115 (or 116) should be taken within the first two years.
    - For students selecting a Foreign Language (CORE 14x), every effort should be made to register for that language in the first semester at King's.

| | **1st Year – Fall** | cr. | | **1st Year - Spring** | cr. |
|---|---|---|---|---|---|
| | MATH 127[5] Logic & Axiomatics | 3 | | MATH 130 Analytic Geometry & Calculus II | 4 |
| | MATH 129[5] Analytic Geometry & Calculus I | 4 | | CS 100 Introduction to Computing or CORE | 3 |
| | CORE | 3 | | CORE | 3 |
| | CORE | 3 | | CORE | 3 |
| | CORE | 3 | | CORE | 3 |
| | CORE 090 First Year Experience | 1 | | | |
| | | **17** | | | **16** |
| | **2nd Year – Fall** | | | **2nd Year – Spring** | |
| | MATH 231[6] Analytic Geometry & Calculus III | 4 | | MATH 250 Linear Algebra | 4 |
| | MATH 235[6] Discrete Mathematics | 3 | | CORE | 3 |
| | CORE | 3 | | CORE | 3 |
| | Science Group* | 3 | | Science Group* | 3 |
| | CS 116 Fund. of Soft. Dev. I **with** CS 116L Lab | 3 | | CS 117 Fund. of Soft. Dev. II **with** CS 117L Lab **OR** CS 100 Intro to Computing **OR** CORE | 3 |
| | | **16** | | | **16** |
| | **3rd Year – Fall** | | | **3rd Year – Spring** | |
| | MATH 367 Real Analysis I | 3 | | MATH 490 Junior Seminar | 1 |
| | MATH Track** | 3 | | MATH Track** | 3 |
| | CORE | 3 | | MATH Track** | 3 |
| | CORE | 3 | | CORE | 3 |
| | Free Elective[2, 4] | 3 | | Free Elective[2, 4] | 3 |
| | | **15** | | | **13** |
| | **4th Year – Fall** | | | **4th Year – Spring** | |
| | MATH 425 Abstract Algebra | 3 | | MATH Track** | 3 |
| | MATH Track** | 3 | | MATH Track**/Elective | 3 |
| | CORE | 3 | | Free Elective[2, 4] | 3 |
| | Free Elective[2, 4] | 3 | | Free Elective[2, 4] | 3 |
| | Free Elective[2, 4] | 3 | | | |
| | | **15** | | | **12** |

**Total Credits Required for Graduation = 120**