# Area of Focus: Mathematics 

Associate in Arts (AA) transfer degree

This Sample Transfer Plan is for students intending to major in Mathematics after transfer, but who have not selected a transfer institution. Students who have a specific transfer school in mind should work with BHC and transfer school advisors to ensure the transfer school's requirements are met.

The Mathematics area of focus will help develop rigorous, logical thinking; problem-solving skills; appreciation of and familiarity with complex structures and algorithms; and the ability to learn technical, detailed or abstract material. After transfer, students can choose emphases in education (secondary or middle school), applied mathematics, statistics, actuarial science, computational math or dataenabled applications, as well as prepare for graduate school. Mathematicians solve problems in such diverse fields as medicine, management, economics, finance, government, computer science, social sciences, physical sciences, and engineering.

| General Education Recommendations: minimum 37 credits |  |
| :---: | :---: |
| This section includes the complete Illinois Articulation Initiative General Education Core Curriculum (IAI GECC), which is a package of courses meeting general education requirements at more than 100 participating Illinois colleges and universities. |  |
| Communication ( 9 credits) - all courses required <br> ENG 101 Composition I (3) - grade 'C' or better required <br> ENG 102 Composition II (3) - grade 'C' or better required <br> SPEC 101 Principles of Speech Communication (3) | Social \& Behavioral Sciences (9 credits) <br> Must include courses from two disciplines <br> Choose three: IAI: S courses (3) <br> If planning to teach Secondary Math, include: |
| Humanities \& Fine Arts (9 credits) <br> PHIL 100 Logic -or- other IAI: H or HF course (3) <br> Fine Arts - choose one IAI: F or HF course (3) <br> Humanities or Fine Arts - choose one IAI: F, H, or HF course (3) | PSYC 101 Intro to Psychology (3); and one of: <br> HIST 105 US History to 1877 (3) -or- <br> HIST 106 US History since 1877 (3) -or- <br> POLS 122 American National Government (3) |
| Mathematics ( 3 credits min.) MATH 124 Calculus I with Analytic Geometry (4) | Physical \& Life Sciences ( 7 credits min. including one lab) <br> Physical Science - PHYS 201 Mechanics and Thermal Dynamics (5) - <br> or- CHEM 101 General Chemistry I (4) <br> Life Science - choose one IAI: L course (3 min.) |

## Elective Recommendations: <br> up to 23 credits

This section includes courses appropriate for this area of focus. Because transfer institutions vary in their acceptance of coursework, see Course Transfer Tables and Transferology, or an advisor. IAI courses are identified with an asterisk *.
Seek advising about other elective courses that may support your reasons for choosing this area of focus.
See "Course Transferability" on page 2 of this guide.
Computer Science courses:
CS 105 Computer Science: Principles (3)
Calculus series: complete levels I, II, and III at same school to aid course transferability to 4-yr. institutions:
MATH 225 Calculus II with Analytic Geometry (4) *
MATH 226 Calculus III with Analytic Geometry (5) *

## Choose one, or both:

MATH 230 Linear Algebra (3) * a pre-requisite for many 300 - and 400-level Math courses
MATH 235 Differential Equations (3) * for emphasis in
applied mathematics or in engineering \& physics fields

CS 121 Intro to Computer Science (4) *
Other Math courses: for emphases in applied mathematics, computer science, or statistics
MATH 161 Discrete Math (3)*
MATH 228 Probability and Statistics (3) *
NOTE: MATH 124 pre-requisite courses, if needed, can be used as elective credits.

MATH 112 College Algebra (4) -and/or- MATH 116 Trigonometry (3); -or- MATH 118 Precalculus (5)

## Minor or second major:

Encouraged after transfer except for students planning to continue with graduate school in mathematics. Examples are business, chemistry, computer science, economics, engineering, finance or physics. Begin at BHC with 1-3 courses that might include ACCT 101-102-103-104, CHEM, CS (not CS 100), ECON, GE or PHYS. Discuss specific course options and transferability with an advisor.

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Second Language: Consider potential second language admission and/or graduation requirements of transfer schools, which may be satisfied with high school and/or college courses. Consult an advisor.

## 60 total credits required for AA degree (General Education + Electives)

Non-Western studies graduation requirement. To graduate with the AA degree, include at least one non-Western studies course, which can simultaneously fulfill a general education requirement in humanities, fine arts, or social and behavioral science, or taken as an elective. Choose from ANTH 100 or 102; ART 285 or 286; ENG 217, 218 or 219; HIST 222, 141, 142 or 151; HUM 102; IS 200; or MUSC 158.

## Learn More About This Area of Focus:

- Get to know Black Hawk College Career Services Phone: 309-796-5626
- Visit Career Coach to Browse Careers. Includes job data and open positions for the greater Quad City region and beyond.
- Browse careers at Collegegrad.com/careers O*Net OnLine Occupational Outlook Handbook Occupational Profiles
- For additional information visit: American Mathematical Society; Mathematical Association of America


## Course Transferability:

- Course and transfer requirements can vary among institutions and may differ from the recommendations on this guide. Grades of ' $C$ ' or better may be required for a course to transfer, especially courses intended for the major.
- Students are advised to select a transfer school as soon as possible, typically before completing $\mathbf{3 0}$ college-level credits.

| Where to transfer? <br> Explore transfer colleges and universities and their majors: |  |  |
| :---: | :---: | :---: |
| Explore Colleges and Universities <br> $\underline{\text { https://www.bhc.edu/academics/tran }}$ <br> sfer-planning/explore-colleges- | Illinois Institutional Profiles <br> $\underline{\text { universities/ }}$ | $\underline{\text { htps://illinoispostsecondaryprofiles.com/Home/l }}$ndex |
| College Navigator |  |  |

## Degree Timeframe:

- Students who complete an average of 15 college-level credits in four consecutive fall and spring semesters could complete the degree in two years. Students determine their own pace and progress and should consider their work and personal commitments, course difficulty, course pre-requisites, and possible need for additional courses determined by placement assessments. Advisors are available to discuss credit load and schedules appropriate for student goals and circumstances.
- Students transferring before completing the associate degree should discuss Reverse Transfer with their BHC advisor. Black Hawk College will evaluate your college or university work to determine if those credits will fulfill the remaining requirements of the associate's degree.


## Advising Notes:

- See the current BHC Catalog for all IAI course codes, course descriptions, pre-requisite information, and complete graduation requirements to earn the degree. The area of focus is not stated on student transcripts.
- This guide is not a substitute for advising. All students are encouraged to connect with their assigned BHC advisor each semester.

| Semester | Meet with BHC advisor | Registration begins |
| :---: | :---: | :---: |
| Summer and Fall | February or March | $1^{\text {st }}$ Tuesday in April |
| Spring \& minimester | September or October | $1^{\text {st }}$ Tuesday in November |


| BHC Contacts |  |  |
| :---: | :---: | :---: |
| QC Campus Advising / Moline, IL <br> Building 1, Advising Center <br> 309-796-5100 <br> Email advc@ @hc.edu | East Campus Advising / Galva, IL <br> Building A, Room 246 <br> $309-854-1709 ~$ | Mathematics Department |

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