



Sample Transfer Plan

Area of Focus: *Pre-Engineering*

Associate in Science (AS) transfer degree

East Campus students may need to take certain CS, MATH, and PHYS courses at the QC Campus or online. All GE courses are taught on the QC Campus.

This Sample Transfer Plan is for students intending to major in professional Engineering after transfer, and who have not selected a transfer institution, or may be transferring to a school for which BHC does not have transfer resources. Students who have a specific transfer school in mind should seek advising from BHC and the transfer school to ensure the transfer institution's requirements are met. *Students interested in Engineering Technology programs should not use this guide, but see an advisor.*

The Pre-Engineering area of focus prepares students to apply to professional Engineering programs by offering foundational courses in general engineering, mathematics, and science. Engineering programs are highly structured to meet the Accreditation Board for Engineering and Technology (A.B.E.T.) standards required for registration as a professional engineer. Students who successfully complete the Bachelor of Science degree in engineering may enter such careers as design, production and construction, operations, sales, management, testing, teaching and consulting. Two other areas, research and development, require an advanced degree.

The various [Engineering fields](#) require certain courses in common as well as specific courses applicable to that field. Therefore, students in their freshman and sophomore years should begin to give serious thought to both their field of engineering and to its application in the employment market. Transfer schools also vary in the engineering fields they offer.

Transfer schools differ in their acceptance of Associate in Science degrees. Students may complete the Associate in Arts degree instead, or select courses to meet the transfer school's general education requirements in lieu of either the AA or AS degree. Math, science, and general engineering course sequences should be started as soon as possible.

| General Education Recommendations: | | minimum 37 credits |
|---|---|---------------------------|
| This section partially completes the 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. Completion of the IAI GECC requires one more Social & Behavioral Science course, and one more Humanities or Fine Arts course. | | |
| Communication (9 credits) – all courses required ENG 101 Composition I (3) – grade 'C' or better required ENG 102 Composition II (3) – grade 'C' or better required SPEC 101 Principles of Speech Communication (3) | Social & Behavioral Sciences (6 credits) - must include courses from two disciplines ECON 221 Principles of Macro Economics (3) or ECON 222 Principles of Micro Economics (3) - <i>consult transfer school</i> Choose one IAI: S course (except ECON). <i>For industrial engineering take PSYC 101 Introduction to Psychology (3)</i> | |
| Humanities (3 credits) Choose one IAI: H, or HF course (3) Fine Arts (3 credits) Choose one IAI: F or HF course (3) | Mathematics (6 credits min.) MATH 124 Calculus I with Analytic Geometry (4) and MATH 225 Calculus II with Analytic Geometry (4) | |
| Physical & Life Sciences (10 credits min. including one lab) Physical Science – PHYS 201 Mechanics & Thermal Physics (5) and PHYS 202 Electricity and Magnetism (5) | | |
| Life Science – choose one IAI: L course (3 min.) <i>required for BHC graduation, & the IAI GECC; not required by all engineering fields</i> | | |

| Elective Recommendations: | | up to 27 credits |
|---|--|-------------------------|
| <p>This section includes courses appropriate for this area of focus. Because transfer institutions vary in their acceptance of coursework, check course transferability with Transfer Equivalencies, 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.</p> | | |
| <p><u>Recommendations apply to many engineering fields; however, transfer schools and specialties can differ especially for agricultural, biological, chemical, computer, & software engineering.</u></p> <p>General Engineering courses: GE 101 Engineering Graphics & Geometry (3)* GE 201 Analytical Mechanics: Statics (3)* GE 202 Analytical Mechanics: Dynamics (3)* GE 205 Elementary Mechanics of Deformable Bodies (3)*</p> <p>Chemistry course(s): CHEM 101 General Chemistry I (4)*</p> <p><i>NOTE: for chemical engineering, take CHEM 203 Organic Chemistry I (5)* and CHEM 204 Organic Chemistry II (5)* instead of GE 202 & GE 205</i></p> | <p>Additional Mathematics courses: MATH 226 Calculus III with Analytic Geometry (5)* - completes the Calculus sequence MATH 235 Differential Equations (3)*</p> <p>Computer Science programming course: CS 121 Intro to Computer Science (3)* or CS 101 Intro to Structured Programming (3)</p> <p>Other Electives: <i>consult transfer school</i> CHEM 102 General Chemistry II (4)* CS 225 Advanced Programming (3)* MATH 230 Linear Algebra (3)*</p> | |
| <p>Foreign Language: Consider the foreign language admission and/or graduation requirement of potential transfer schools, which may be satisfied with high school and/or college courses. Consult an advisor.</p> | | |
| <p>64 total credits required for AS degree (General Education + Electives)</p> | | |
| <p>Non-Western studies graduation requirement. To graduate with the AS 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 102; ART 285 or 286; ENG 217, 218, or 219; HIST 222, 141, 142, or 151; IS <u>200</u> (see advisor if IS <u>220</u> taken prior to fall 2018); or MUSC 158.</p> <p>Students pursuing Pre-Engineering will often complete more than the 64 required credits for graduation due to the math and science courses required for admission to engineering majors.</p> | | |

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 physics, chemistry, mathematics, and engineering science courses to transfer and for admission to an engineering major. A similar policy may exist for general education courses.
- Students should decide on an Engineering field and a preferred transfer school by the beginning of the sophomore year (typically before completing 30 college-level credits). Course requirements vary by engineering specialty and school.

| Where to transfer? | | |
|---|--|--|
| To research transfer colleges and universities, visit the following links | | |
| BHC Transfer Guides and Agreements https://www.bhc.edu/academics/transfer-programs/guides-and-agreements/ | Illinois institutional profiles http://ibheprofiles.ibhe.org/ | College Navigator https://nces.ed.gov/collegenavigator/ |

Degree Timeframe:

- Students who complete an average of 16 college-level credits in four consecutive fall and spring semesters could complete the AS 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.
- BHC offers a selection of courses in the summer term and during the December/January minimester.

BHC develops Sample Transfer Plans as a service to students. Final responsibility for verifying all graduation and transfer requirements rests with the student. PLAN CREATED Dec. 14, 2017; updated Jan. 30, 2018; update July 1, 2019

Advising Notes:

- See the current [BHC Catalog](#) for all IAI courses (GECC and Majors codes), course descriptions, pre-requisite information, and complete graduation requirements to earn the AS degree. The area of focus is not stated on student transcripts.
- See the [AS Degree Planning Worksheet](#) for a list of IAI GECC courses, or consult the “Associate in Science” degree in Degree Audit on myBlackHawk (student tab).
- This guide is not a substitute for advising. All students are encouraged to seek advising each semester. Note that advising is required prior to registering for students who have earned fewer than 30 college-level credits.

| Semester | Meet with BHC advisor | Registration begins |
|---------------------|-----------------------|-------------------------------------|
| Summer and Fall | February or March | 1 st Tuesday in April |
| Spring & minimester | September or October | 1 st Tuesday in November |

| BHC Contacts | | |
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| QC Campus Advising / Moline, IL Building 1, First Stop Center 309-796-5100 Email advqc@bhc.edu | East Campus Advising / Galva, IL Building A, Room 246 309-854-1709 | Natural Sciences & Engineering Department |