Bachelor of Applied Science in Applied Cybersecurity

The BAS in Applied Cybersecurity is designed to meet the growing employment demands for an information security related workforce. This program is for undergraduate students with a strong interest in practical and applied training in information technology and cybersecurity pathways and who have already earned an associate's degree or equivalent hours and are looking to complete the last two years necessary for a bachelor's degree. The program is completed online. Applicants to this program will work with the program's academic success coach on the KU Edwards Campus for advising. Courses in this program will support the following Degree Learning Outcomes:

- Demonstrate the ability to effectively work as both a team member and leader in workplace environments.
- Effectively communicate to a wide-ranging audience with varying levels of technical ability.
- Recognize the need and importance of continued learning and professional development.
- Analyze systems, programs, and processes (for security risks in Cyber; data problems in Applied Data) and provide appropriate analysis and solutions.
- Apply current practices and procedures.

The Kansas City area is home to numerous tech-sector growth initiatives, such as the National Security Crossroads, an effort led by Kansas and Missouri focused on raising government awareness of security-related operations. These initiatives encompass seven major military bases as well as 11 national-security installations. In 2020, more than 20,000 tech-job openings were posted in Kansas City, the third-highest percentage growth in tech jobs in the U.S., trailing only San Francisco and Austin. In the next 10 years, the region's tech-workforce demand is expected to increase. More specifically related to information security workforce needs, in 2019 the Mid-America Regional Council identified a need to strengthen educational offerings in cybersecurity to meet area employers' growing demand for talent. Nationally, according to the Bureau of Labor Statistics, employment of information security analysts is projected to grow 33 percent from 2020 to 2030, much faster than the average for all occupations. About 16,300 openings for information security analysts are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

Applications to the BAS in Applied Cybersecurity program will generally be considered under the guidelines of the Transfer Admission Standards. Students must apply and be admitted by the School of Professional Studies. In addition, to be considered for admission, students will need to have completed the prerequisite course work and have already earned 60 credit hours. The deadline for admission consideration is Dec. 15 for the spring semester.

The **BAS in Applied Cybersecurity** has the following degree requirements in addition to the statewide general education requirements:

- 120 (minimum) total credit hours
- 45 (minimum) upper-division credit hours (these may include the following)
- 10-11 foundational quantitative core credit hours
- 9 foundational information systems core credit hours
- 6 professional studies core credit hours
- 30 applied cybersecurity core credit hours
- 6 applied cybersecurity elective credit hours
- 3 capstone credit hours

The following tables describe the specific courses to fulfill the above requirements.

Code	Title	Hours
Foundational Quantitative Core: 10-11 Credit Hours		
MATH 101	College Algebra: _____ (and MATH 103)	4-5
or MATH 104	Precalculus Mathematics	
or MATH 115	Calculus I	
or MATH 125	Calculus I	
PFS 304	Introduction to Real-World Statistics	3
or BSAN 202	Statistics	
or EECS 461	Probability and Statistics	
or MATH 365	Elementary Statistics	
or MATH 526	Applied Mathematical Statistics I	
or MATH 628	Mathematical Theory of Statistics	
or PSYC 210	Statistics in Psychological Research	
ITEC 303	Discrete Math for Information Technology Professionals	3
or EECS 210	Discrete Structures	
Foundational Information Systems Core: 9 Credit Hours		
ITEC 301	Survey of Information Systems	3
ITEC 302	Introduction to Programming	3
or EECS 268	Programming II	
ITEC 380	Managing IT Projects	3
Professional Studies Core: 6 Credit Hours		
PFS 301	Communication in the Workplace	3
or ENGL 362	Foundations of Technical Writing	
PFS 302	Leadership in Practice	3
or ABSC 150	Community Leadership	
or BBA 303	Survey of Management and Leadership	
or BBA 305	Operations and Supply Chain Management	
or COMS 342	Problem Solving in Teams and Groups	
or LDST 201	Introduction to Leadership	
or MGMT 305	Survey of Management and Leadership	
or MGMT 310	Principles of Management	
or PUAD 441	Public Service Leadership	
or SCM 310	Management Science and Operations Management	
Applied Cybersecurity Core: 30 credit hours		
ITEC 312	Emerging Technologies in Cybersecurity	3
ITEC 340	Computer and Information Security	3
ITEC 342	Information Security Management	3
ITEC 420	Operating Systems	3
ITEC 422	Computer Networks	3
ITEC 424	Network Security	3

ITEC 426	Cyber Defense and Countermeasures	3
ITEC 428	Testing and Vulnerability Analysis	3
ITEC 450	Social and Professional Issues	3
ITEC 454	Information Security Law and Policy	3
Applied Cybersecurity Elective Courses: 6 Credit Hours		**6**
Choose any two 300-400 level ITEC courses not already included in the degree plan. See list below:		
ITEC 310	Computer Organization and Platform Technologies	
ITEC 314	Fundamentals of Applied Data Analytics	
ITEC 316	Database Applications	
ITEC 320	System and Network Administration	
ITEC 330	Web Systems and Technologies	
ITEC 404	Fundamentals of Data Visualization	
ITEC 406	Data Mining and Intelligence	
ITEC 410	Software Engineering and Management	
ITEC 412	Predictive Analytics and Forecasting	
ITEC 416	System Integration and Architecture	
ITEC 429	Digital Forensics	
ITEC 430	Human-Computer Interaction	
ITEC 440	Cloud Computing	
ITEC 452	Special Topics in ITEC: _____	
Capstone: 3 Credit Hours		
ITEC 490	ITEC Capstone	3

BAS Applied Cybersecurity 4-Year Graduation Plan

The undergraduate program in Applied Cybersecurity BAS is designed for students who have earned an associate's degree or equivalent hours (freshman/sophomore level) and wish to complete the upper-level courses necessary for a bachelor's degree. Junior/Senior level KU courses are offered online through the School of Professional Studies at the KU Edwards Campus in Overland Park, 12600 Quivira Rd., Overland Park, KS 66213.

Students considering this degree option should contact the Applied Cybersecurity academic success coach on the Edwards Campus (913-897-8539) for advising on the first two years of study. An academic success coach will help develop a personalized program plan of study for degree completion.

Freshman

Fall	Hours	Spring	Hours
MATH 101 or 104 (Core 34: Math and Statistics (SGE))[030]	3-5	MATH 103 (Needed if MATH 101 taken 1st semester)	2
Core 34: English (SGE)[010]	3	Core 34: English (SGE)[010]	3
Core 34: Communications (SGE)[020]	3	Core 34: Natural and Physical Sciences (SGE)[040]	4-5
Core 34: Social and Behavioral Sciences (SGE)[050]	3	Core 34: Arts and Humanities (SGE)[060]	3
Open Elective Course	3	Open Elective Course	3
	15-17		**15-16**

Sophomore

Fall	Hours	Spring	Hours
Core 34: Social and Behavioral Sciences (SGE)[050]	3	Core 34: Global Culture (SGE)[070]	3
Core 34: US Culture (SGE)[070]	3	MATH 365 (or PFS 304)	3
Core 34: Arts and Humanities (SGE)[060]	3	Open Elective Course	3
Open Elective Course	3	Open Elective Course	3
Open Elective Course	3	Open Elective Course[1]	3
	15		**15**

Total Hours 60-63

Third and Fourth Year Online through the KU Edwards Campus in Overland Park

Junior

Fall	Hours	Spring	Hours
ITEC 302	3	ITEC 301	3
ITEC 303	3	ITEC 312	3
ITEC 380	3	ITEC 340	3
PFS 301	3	ITEC 422	3
PFS 302	3	ITEC 454	3
	15		**15**

Senior

Fall	Hours	Spring	Hours
ITEC 342	3	ITEC 424	3
ITEC 420	3	ITEC 450	3
ITEC 426	3	ITEC 490 (Capstone)	3
ITEC 428	3	Applied Cybersecurity Elective Course	3
Applied Cybersecurity Elective Course	3	Open Elective Course[1]	3
	15		**15**

Total Hours 60

[1] Open elective credits needed and total hours for the bachelor's degree depends on which math and science courses were taken. Consult with your academic success coach.

Notes:

* - This course is a Required major course and is also part of Core 34: Systemwide General Education. If this course is not taken to fulfill the Core 34:SGE requirement, it must be taken in place of elective hours.

** - This course is a Recommended Core 34: Systemwide General Education course. This specific course is not required but is recommended by the program's faculty.

*** - This course is a Required Core 34: Systemwide General Education course. This program is approved by the Kansas Board of Regents to require this specific Core 34:Systemwide General Education course. If a student did not take this course it must be taken in addition to other degree requirements.